The Federation of Ontario Naturalists
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THE STRATEGIC LAND USE PLAN

FOR

NORTHWESTERN ONTARIO

The Federation of Ontario Naturalists

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A Submission To

THE MINISTRY OF NATURAL RESOURCES

concerning

THE STRATEGIC LAND USE PLAN FOR NORTHWESTERN ONTARIO

Prepared on behalf of

The Federation of Ontario Naturalists

1975

"I've looked at a lot of regulatory agencies, and the longer I'm around here, the more I believe that every one of these tends, in a period of time, to reflect the interests of the industry it is supposed to be regulating".

John Turner
Minister of Justice for Canada
January, 1972

The Federation of Ontario Naturalists

1262 Don Mills Road, Don Mills, Ontario M3B 2W7 Phone: (416) 444-8419

The Honourable Leo Bernier
Minister of Natural Resources
Whitney Block
Queen's Park
Toronto, Ontario.

Dear Mr. Bernier

Re: Strategic Land Use Plan for Northwestern Ontario.

I am pleased to present, on behalf of the Federation, our response to the proposed Strategic Land Use Plan for Northwestern Ontario.

As noted in the submission, we consider the SLUP programme to be a genuine initiative, worthy of strong support and commendation. We believe that the programme has great potential for development of a coordinated land-use plan, as well as the potential to resolve dangerously conflicting policies.

We hope that this document will provide your Ministry with additional insight, and wish to stress that we would be prepared to meet with any of your officials if that is of assistance.

Yours very truly,

Gordon MacKenzie
President.

MS/dj

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18.0 Conclusion and Recommendations Summary

The Ministry of Natural Resources is to be strongly commended for its genuine initiative in developing the Strategic Land Use Programme. SLUP represents the first serious attempt to resolve conflicting policy and to develop a coordinated land-use programme.

The Federation strongly supports the concept and basic approach. But it has many serious reservations both about the detailed handling, and about many of the proxy policies suggested for the Northwestern Region. We have therefore carefully reviewed the document; we have - very briefly - examined proxy policy; and we have produced a number of recommendations. No attempt has been made to detail case examples; this could readily be done, but space simply does not permit it.

We trust that each of the following recommendations will be carefully studied, and acted upon. Specifically, the Federation recommends:

Urban

1) a. that no policy decision be made with respect to diversification of industry at any growth node, until the implications - expected and "worst case" - are set out for each of the threatened and decimated species, and their ecosystems, likely to be detrimentally affected by such diversification;

b. that Ministry Policy require - and provide adequate buffer zones to ensure - that no decimation occur of decimated, rare and endangered species, as a result of expansion and diversification within townsites;

c. that with respect to (a) and (b) above, particular attention be paid to white pelican, eastern cougar, bog adders mouth orchid, lake sturgeon, kiyi, blackfin cisco, shortnose cisco, woodland caribou, wolverine, osprey, bald eagle, and SCOL systems (salmonid communities in oligotrophic lakes);

d. that it be clearly stated as Ministry Policy that the protection of rare, threatened and endangered species takes precedence over other stated policies to diversify or expand any given industry or townsite.

2) a. that industrial expansion and diversification not be allowed - much less promoted - until its long term influence on the community has been fully explored and documented;

b. that industries not be permitted to locate:
(a) until long term viability is documented and ensured. (e.g. a forest product industry is not located until there is documented evidence of adequate and guaranteed wood supply, with a buffer to ensure that the plant need not close).

(b) until effective contingency plans exist for crisis situations. (e.g. plans of action for water shortages for processing industries)

(c) until plans are made, <u>before development</u>, for the relocation and retraining of employees in transitory operations (e.g. mines and associated processing facilities).

(d) until plans for transitory operations, like mines, are designed to yield the maximal long-term benefit to the community, and not simply the "here and now" income, with a "bust" to follow.

3) a. that the Ministry of Natural Resources, acting through other appropriate Ministries, seek mandatory official plans for each municipality or unincorporated community, by the arbitrary date of January 1st, 1980.

b. that the Ministry set and enforce <u>mandatory</u> standards for the protection of hazard lands, including that from all filling and all construction, <u>to the regional storm level</u>;

c. that the Government establish and enforce mandatory per capita minimum municipal park space requirements for all communities in the region;

d. that the forgoing standards not be made flexible, so that municipalities will tend not to apply pressure for specific exemptions.

4) a. that proxy policy be adopted with respect to rural residential development, subject to (b) below;

b. that proxy policy be ammended so as to include protection for adequate buffer zones around recreation lands, hazard lands, sensitive biological areas, and strategic aggregate reserves.

c. that careful consideration be given to the desirability of including class 1V agricultural lands within the exclusion areas.

5) a. that the Ministry adopt as policy the creation of circum-urban buffers to restrict urban sprawl, and to retain the many values of rural areas in juxtaposition to existing towns;

b. that circum-urban buffers be substantial areas, sufficiently wide to fulfill their purposes, and not simply ribbons of land for later location of linear utilities;

c. that careful consideration be given to buffer placement, so as to provide for some optimal town size within the buffer;

d. that clear land-use criteria be developed, and enforced, which will protect the desired qualities of circum-urban buffers.

6) a. that, in the creation of conceptual development philosophies and plans for individual communities, close attention be paid to the potential for a land-use mosaic, and specifically to the desirability of restricting rural residential use to specific (low density) areas.

b. that Ministry policy define rural-residential minimum parcel sizes as 10 acres on soils over 4 feet deep, and 20 acres in other locations.

Rural Development

7) a. that Ministry Policy be to develop and implement the management principles from the Lakeshore Capacity Study - as maximum development limitations at the first possible opportunity;

b. that, until the foregoing is in effect, Ministry Policy be to analyze each lake using the Manual for Calculating the Capacity of a Lake for Development before issuing any approval on any lease for property abutting that lake;

c. that Ministry Policy be to oppose or prevent any development which elevates, or seems likely to elevate, the level of any lake above its present status (i.e. Levels 1,2,3,4, as described in the above Manual);

d. that Ministry policy be to close all SCOL (Salmonid Community in Oligotrophic Lakes) systems, which are at or approaching their threshold limit, to further development, and to seek all possible methods of reducing nutrient loading thereon;

e. that Ministry Policy be (a) to retain the natural perceptual qualities of waterways in the region and (b) to do so by keeping large sections of shoreline undeveloped, by stipulating the retention of shoreline vegetation in leases, and by educational methods;

f. that Ministry Policy be to oppose or to prevent the development under all circumstances of more than 50% of a lake's shoreline;

g. that Ministry Policy be to oppose or prevent development of all lands adjacent to major shoreline wetlands.

h. that Ministry Policy be to prevent the destruction of any shoreline marshes by filling, by clearing, or by flooding. This policy must be clearly stated and uniformly applied.

i. that Ministry Policy be to strictly enforce the Lakes and Rivers Improvement Act;

j. that Ministry Policy be to seek the retention of natural shoreline characteristics, including shrubby growth, deadfalls, and natural herbaceous vegetation, along all developed shoreline.

8) a. that further land disposal occur by lease, rather than by sale.

9) a. that lease fees be made adequate to recover all public costs.

10) a. as a general principle, proxy policy of reserving
riculture class 1,2,and 3 land for farming should be adopted;

b. any proposal to bring under cultivation unfarmed class 1,2, or 3 lands should be examined individually, to ensure that such a proposal is the most desirable;

c. as a general principle, irreversible destruction of Class 4 agricultural land should not be permitted;

d. any proposal to bring under cultivation Crown owned Class 4 agricultural land should be individually and publicly examined to ensure that such a proposal is indeed the most effective use of the land.

11) a. that Ministry Policy be to review all tile drainage proposals, and to oppose any such proposal where it is likely to have an even cumulatively significant effect on SCOL systems or unusual species habitat:

b. that Ministry Policy be to prevent or oppose any proposal to channelize a hither-to unchannelized stream or river;

c. that Ministry Policy be to seek practices, policies, and programs to restore already-channelized streams to the best practicable condition.

12) a. that the Ministry develop, and adopt as policy, a document setting out the manner in which stream sides should be managed.

b. that the Ministry analyze the extent of existing problems, and in concert with the Ministry of Agriculture, develop a programme for action.

13) a. that the Ministry examine status and predictable trends within all waterways which are receptacles for agriculturally-derived chemical fertilizers, in order to develop logical Ministry Policy with respect thereto.

14) a. that Ministry policy be to encourage and to assist landowners and occupiers to establish complex fence rows, particularly in those areas which have been largely cleared and which have high populations;

b. that Ministry Policy be to continue and to increase pressure for reversal of the outdated Ministry of Agriculture policies which encourage fence row destruction.

Commercial Fisheries

15) a. that no policy for increased fish yields be adopted until and unless the text-discussed data is publicly reviewed, and until and unless such proposals are demonstrated to be biologically and socially sound.

16) a. that the Ministry cease to produce such misleading statements about mercury pollution in any future documents.

b. that the Ministry treat the problem of mercury contamination as a contamination problem and not as a marketing problem.

c. that the Ministry <u>not</u> permit, much less encourage, the taking of mercury contaminated (i.e.> 0.5 ppm mercury) fish for sale outside Canada;

d. that the Ministry, as policy, close all waters to fishing which produce fish approaching or exceeding the level of impingement;

e. that the Ministry formulate as policy, a long-term plan for the use (or non-use) and restoration of mercury-contaminated waterways;

f. that the Ministry, (in concert with other provincial and federal agencies), take the initiative to develop and set in place any necessary programmes to alleviate the problems which Indians, tourist operators, and any others are experiencing as a result of mercury contamination;

g. that no further expansion of existing facilities or construction of new facilities which use mercury in any process, be permitted unless and until the operator can and will achieve zero-discharges of mercury.

17) a. that in the context of 'underfished licences' the Ministry re-examine the apparent preoccupation with production and strive toward optimized benefits rather than maximized production;

b. that the Ministry accept as desirable, the existence of unfished or under-fished licences, and

c. that the Ministry adopt as policy, the retention of a substantial number of areas in an unfished state, for use in contingencies, such as pollution situations, and recovery periods for over-fished populations.

18) a. that Ministry Policy examine and deal specifically with regulation of the cisco fisheries within the region.

b. that the foregoing policy call specifically for the full protection of viable populations and habitat, for all species which have been seriously decimated in other parts of the Great Lakes Basin.

c. that the Ministry seriously examine the advisability of a moratorium on fishing grounds and methods likely to take Kiyi, blackfin cisco, and shortnose cisco until proper management programmes for these species are in place and until the species' viability is assured.

d. that the Ministry undertake such measures as are necessary to lessen the impact of this programme upon the commercial fishermen which presently rely upon cisco fisheries.

19) a. that the Ministry <u>not</u> adopt a policy of increasing the bait fish industry, at all;

b. that the Ministry adopt a policy and develop a programme to phase out existing bait fish operations in which specimens are, or may be ,transferred to water bodies from which the specimens did not originate; and

c. that the Ministry seek regulations (enabling legislation if necessary) requiring fishermen to destroy left over bait fish and to dispose thereof upon land, rather than releasing them into water bodies.

Commercial Trapping

20) a. that a public review of existing trapping policies - including detailed data - be made, we urge that a policy which is biologically and socially sound be formulated.

Wild Rice

21) a. that Ministry policy oppose any cottage development, Hydro dam, or other proposal which would substantively impair wild rice habitat.

b. that Ministry policy toward wild rice production strongly retain the traditional and cultural aspects of production.

c. that in respect of recommendation (b), Ministry policy not call for (a) broadening of picking rights to non-Indians,
(b) substantive alteration of habitat,
(c) spraying to eliminate disease or insects,
(d) the use of non-traditional technology for harvesting or production.

d. that Ministry policy call for a careful analysis of new strains and their full implications before any replacement of existing stands is undertaken

Commercial Timber

22) a. that Ministry policy stipulate that any wood cutting operations on Crown land must be planned, conducted and controlled to ensure the perpetual maintenance (within the cyclical context of tree production) of the natural environment. This means for example,

that operations must protect waterways from destruction and degradation, must protect soils from progressive loss, and must ensure the retention of biological diversity and quality.

23) a. that a moratorium be established immediately on all cutting activities and on the issuance of approvals for cutting in the presently mapped eastern cougar habitat and in a surrounding buffer area of at least ten miles. If water surfaces are involved, or other evidence suggests the necessity, the buffer should be appropriately larger; and

b. that the Ministry of Natural Resources, through the proposed Endangered Species Committee, establish a management plan for the eastern cougar habitat, to which all cutting licences, approvals, and activities must comply.

24) a. that in order to protect the White Pelican, the Ministry immediately map an exclusion zone in which logging will not be permitted:

(a) within direct sound or sight of the colony, <u>at any</u> time,
(b) on forest areas abutting waterways in which the birds feed,
(c) to interfere with streams or occur on slopes near waterways, which would reduce quality or clarity in feeding areas.

b. that the Ministry issue no approvals for cutting within a twenty mile radius of the colony until the afore-discussed zone is mapped and approved by the proposed Endangered Species Committee.

25) a. that the Ministry of Natural Resources develop specific and detailed guidelines concerning all relevant aspects of logging within caribou habitat, that these be approved by the Wildlife Branch, and that these be implemented.

b. that all licences and cutting approvals be made conditional to the observance and execution of the guidelines urged in recommendation (1). The necessity of a performance bond should be considered carefully in this context.

c. that until the guidelines referred to in recommendation (a) are developed, approved, and in effect, no cutting be permitted within caribou habitat.

26) a. that the protection of sturgeon habitat and particularly sturgeon spawning beds must take priority over the production of wood;

b. that logging activities be permitted in the vicinity or upstream from sturgeon spawning beds only if the logging practices are adequate to fully protect spawning beds;

c. that the Ministry rapidly complete mapping of sturgeon spawning beds, with special priority to those areas scheduled to be cut during the next two decades.

27) a. that the (preliminary) Administrative Policies of the Ontario Provincial Parks System, with respect to logging in provincial parks, be adopted, implemented, and respected;

b. that commercial cutting be terminated in all park reserves, at the earliest possible opportunity, and not after the areas are already logged over;

c. that the ultimate control on cutting activities in provincial parks be placed with the Division of Parks, and removed from the Timber Branch, during 1976.

28) a. that further timber allocations should not be committed until a comprehensive parks system plan is completed and until those park areas are set aside for park purposes;

b. that lands set aside for park purposes in either the immediate or distant future, not be logged;

c. that park values be afforded considerably greater weight - and generally precedence - over timber production in land use allocation.

29) a. that proxy policy to utilize the full allowable cut not be adopted;

b. that adopted policy include a substantial buffer to provide for all manner of contingencies;

c. that considerable attention be given to development of a buffer size which is adequate for such contingencies;

d. that the buffer should take the form both of

(a) allowances within the areas to be cut, and
(b) separate areas to be cut only in contingencies, such as an extensive burn elsewhere. These must include lands committed to non-exploitive purposes.

30) a. that Ministry policy be to utilize only that section of the allowable cut which is consistent with the needs of the client group.

31) a. that a new Ministry procedure be adopted for committing Crown lands to logging, which calls for:

(a) public notice, via the Ontario Gazette and a local distribution newspaper, that the Ministry is contemplating the commitment of specified (and mapped) lands to cutting.

(b) public hearing(s), if requested by any individual or organization, into the advisability of committing such lands to cutting. A report thereon should be submitted to the Minister; and

(c) decision by the Minister, or Committee of Cabinet if necessary.

32) a. that Ministry policy at no time permit allowable cut to exceed the approved output target; and

b that the Ministry tie the allowable cut to output target.

33) a. that the Ministry undertake a critical re-examination of forest regeneration practices; and

b. that the basic philosophy to the Ministry's regeneration programme be to retain biological diversity, complexity, and quality, in perpetuity, as well as to produce wood.

34) a. that Ministry policy be to determine allowable cuts on the basis of returning a forest to maturity; not simply on maximizing wood production.

Mining

35) a. that Ministry Policy encourage the designation of parks even if exploration is incomplete; in general, priority of allocation should be given to those land uses, like parks, which will benefit society in perpetuity.

36) a. that current Ministry Policy of closing Parks and Park Reserves to mining activities and claim staking be continued.

37) a. that the Ministry of Natural Resources not seek relaxation of current pollution standards;

b. that the Ministry of Natural Resources seek strengthened standards wherever and whenever current standards are found to be inadequate for the total protection of natural ecosystems.

38) a. that the Ministry assign high priority to the full rehabilitation of worked-out mines, overburden and spoil heaps, and mine-associated work areas.

Wildlife

39) a. that the Ministry create separate policy for the protection of rare, threatened, and endangered ecosystems, and of rare threatened and endangered habitats;

b. that Ministry policy place the protection, and encouragement of rare, threatened, and endangered ecosystems and species in a first priority position, taking precedence over other policies in the region;

c. that Minstry policy be to develop:

a) a reserve and wilderness area system plan incorporating each of threatened and endangered ecosystems of the Region, and
b) management plans for each of the rare, threatened and endangered species of the Region,

by 1980;

d. that Ministry Policy assign considerably greater funds than in the past for the undertaking of recommendation C even if this necessitates reduction in other Ministry programmes;

e. that Ministry policy forestall any further commitment of lands and any habitat-destroying activities, in the known area of threatened and endangered species, until the plans in recommendation C have been formulated and implemented

40) a. that Ministry Policy call for the complete protection of remaining habitat, including (especially) breeding or spawning areas, for

a) White pelican
b) Eastern cougar
c) Wolverine
d) Least weasel
e) Woodland caribou
f) Lake Sturgeon
g) Kiyi
h) Blackfin cisco
i) Shortnose cisco

until detailed management plans are developed and implemented for these species;

b. that Ministry policy call for a moratorium on the fishing and keeping, of Kiyi, blackfin cisco, and shortnose cisco, until the status of these species is clearly documented and until effective management plans for the species, if necessary, are implemented.

41) a. that Ministry Policy be to protect all fisheries (whether exploited or not) from further deterioration, unless there is no alternative, and the proposed action is clearly more beneficial to society than the protection of the fish fauna. Ministry policy should be to oppose any activity or modification which would result in permanent impairment or destruction of a fishery.

42) a. that Sport Fishery Policy be defined in terms of protecting fish faunas, rather than simply in terms of recreational demand;

b. that Ministry Policy be to prevent decimation and gross transformation of sport fishery faunas, in order that biological diversity and quality be retained, and in order that anticipated recreational demand can be met.

43) a. that Ministry Fisheries Policy deal specially with SCOL systems;

b. that Ministry policy be to prevent any action which would, or could reasonably be expected to degrade SCOL systems, or cause gross transformation therein. The only policy taking precedence over this should be the protection or encouragement of threatened and endangered species;

c. in particular, that Ministry Policy be to restrict fishing in SCOL systems to a level such that depletion or compositional degradation will not occur; and

d. that Ministry Policy be to re-examine its fishing regulations, on a local basis at least every three years, to ensure that depletion does not occur.

44) a. that Ministry policy be to preserve, wherever possible, the natural diversity and abundance of wildlife for viewing purposes, particularly in proximity to urban areas;

b. that the Ministry consider the desirability of a policy which would end the consumptive use of wildlife in proximity of highways and important viewing areas, in order to maximize wildlife viewing possibilities; and

c. that Ministry Policy call for the rehabilitation of worked out mine areas, and cut-over lands with techniques which will maximize their wildlife production and wildlife viewing opportunities.

45) a. that Ministry policy be to control hunting so that population levels at no time fall below maximum sustained yield;

b. that Ministry policy be to control hunting in order to ensure an adequate food base for both timber wolf and eastern cougar population.

Parks

46) a. that goal statements for the Provincial Park System include both recreational and biological functions, and set the latter as being of paramount importance;

b. that Ministry Policy call for a comprehensive Park System within the region; adequate to serve the biological purposes of the park system, designed in accordance with concept of e.g. Sullivan and Shaffer (1975); and, implemented through the work of experts like Hills and Maycock.

c. that Ministry Policy call for adequate provincial park space to satisfy the recreational demands of the region.

d. that the Ministry re-examine the adequacy of natural area sizes proposed by the parks Division, since these appear totally inadequate for biological purposes in light of calculations by Addison and Bates (1975) and by Sullivan and Shaffer (1975).

47) a. that the current policy, to provide Near Urban parks for populations of 60,000 or more, only, be continued;

b. that the minimum size for Near Urban Parks be at least 500 acres, and preferably, parks should be considerably larger;

c. that Ministry Policy make it clear that Near Urban Parks are not intended to provide intensive recreational and amusement activities, and that Near Urban Parks are not to be construed in any way as a substitute for Municipal park space;

d. that any future Strategic Land Use Planning documents make the purpose of Near Urban Parks explicitly clear;

e. that the design and priority of establishment for Near Urban Parks be viewed in the context of a total parks system, as discussed in sections 12.1 and 12.8.

48) a. that the Ministry adopt proxy policy, to provide <u>at least</u> one major Natural Environment park per site region;

b. that the Ministry <u>not</u> consider Crown Lands as providing a substitute <u>in any way</u>, for the creation of Natural Environment Parks;

c. that Natural Environment Parks be viewed and established within the context of the total park system and within the context of park priorities as outlined in sections 12.1 and 12.8.

49) a. that Ministry Policy be to locate one wilderness park in each site region;

b. that Ministry policy adopt the size ranges of the Wilderness in Ontario proposal;

c. that, in the selection of park locations, the Division of Parks prepare an analysis for each remaining site region, examining the region as a whole, and analysing alternative and recommended sites. Such an analysis should be in document form and should serve as the basis for park site selection, that the effect of designation on other resource uses be considered in park site selection, but not allowed to become the overiding factor;

d. that park areas be delineated in terms of biological attributes and requirements, not by simple block designation;

e. that Ministry Policy recognize the protection of wilderness areas as one of the costs of opening the region to further and more intensive exploitation, just as the designation of municipal parks is considered a cost of permitting further urban development.

50) a. that the Ministry view Wilderness areas as the most important form of "Nature Reserve" for the perpetuation of Natural ecosystems and their natural ecological, evolutionary, and successional processes;

b. that Ministry Policy be to create nature reserves:

a) to further control use of sensitive habitat already located in provincial parks,
b) to protect unique habitat either of systems or species, which cannot possibly be incorporated into wilderness areas,
c) to designate and protect areas too small to be managed as typical park lands, or located in areas where natural ecosystems are so-restricted that park designation is impossible.

c. that Ministry Policy be to focus particular attention and priority upon the creation of reserves to protect rare, threatened and endangered species, even if this requires several reserves in one region, or several reserves for one species.

51) a. support be given to proxy policy for historical parks and reserves.

52) a. that proxy policy for trails, with one minor alteration, be adopted as Ministry Policy;

b. that Policy list the linear recreation forms - hiking bicycling, horseback riding, snowmobiling, cross-country skiing, and interpretation, rather than including a blanket statement about "all forms of linear recreation".

53) a. that priority be given to acquisition and designation of park lands, during the first decade at least, over the development of parks;

b. that priority should be assigned, in order, to:

a) the single-time task of developing a complete park system plan,
b) the establishment of Wilderness Areas, Nature Reserves, and Natural Environment Parks, with particular emphasis upon Wilderness areas and those Nature Reserves protecting endangered species,
c) Near-Urban and Historical Parks establishment,
d) Trail and Recreation Park creation;

c. Furthermore, we recommend that sections (a) and (b) above be assigned much higher precedence than (c) and (d);

d. that no priority whatever be given to the provision of intensive sports and amusement areas and facilities within towns, since these should remain a Municipal responsibility;

e. that the particular biases and reader manipulation inherent in the SLUP report's Parks Section be considered carefully when evaluating feedback to the public documents.

54) a. that Crown Lands continue to be open to public use, but

b. Proxy Policy of designating primary recreational use areas should not be adopted, since it amounts to a circumvention of park designation.

Cottages 55) a. that Ministry Policy be to permit the present relative position of cottaging as a recreational form to continue, provided, it does not interfere with public recreation, and provided all cottages will be installed and operated without substantive deterioration of the natural environment;

b. that Ministry Policy clarify "public recreation" to include all waterbased public activities, like canoeing, boating, and fishing;

c. that Ministry Policy be to prevent the development, at the utmost maximum, of more than 50% of a lake's shoreline;

d. that Ministry Policy adopt the recommendations set out in section 2.

Electrical Generation 56) a. that Ministry Policy require of electrical generation facilities:

a) that all plants be designed to eliminate all possible impacts on the natural environment,
b) that all plants be designed and operated within the natural constraints of the system (e.g. no diversions on rivers),
c) that all cooling, wash, and other processing waters be designed within closed systems, even if this requires "internalizing" an isolated inland lake,
d) that all plants have total containment systems, capable of trapping all wastes or spills in all contingencies;

b. that Ministry Policy preclude the construction of all new thermal generating plants on the Lake Superior shoreline;

c. that the Ministry adopt policy with respect to high-tension transmission facilities, specifically urging:

a) the minimum possible number of corridors, the combination of lines wherever practicable, and the upgrading of existing lines in preference to the construction of entirely new corridors,
b) the location of corridors together with or in close proximity to other linear utilities like roads, railways, and pipelines,
c) exclusion of all future construction from parks and park Reserves as well as total avoidence of habitat areas of presently rare, threatened and endangered species.

57) a. that Ministry Policy oppose any proposed diversion of water for export from Canada;

b. that Ministry Policy be to protect all rivers within the region from hydro-electric generation. We urge that the Ministry totally block such proposals unless the development is of crucial importance to society, and unless there is no alternative source of power generation.

Flood and Valley Protection

58) a. that the Ministry adopt a policy of opposing and indeed of prohibiting development of any lands subject to flooding by the regional design storm;

b. that the Ministry adopt a policy of refusing to make any alterations to waterways for the purpose of protecting recent development on flood prone lands or to permit new developments on flood prone lands;

c. that the Ministry permit alteration of waterways to protect long-established structures only as a last resort where the removal of buildings from flood prone lands or relocation of occupants is economically impossible, where other forms of protection are either impossible or more damaging, and where the damage likely to be incurred is far greater than the cost of undertaking channel modification.

d. that the Ministry adopt a policy of paying no assistance or compensation to anyone arising out of damage by flooding on land susceptible to flooding by the regional design storm.

59) a. that general Ministry Policy be to prevent all human modifications to watercourses and valleys which can reasonably be expected to increase flow fluctuations and hence cause damage, either to human developments or to the natural environment. This should apply to all actions which are significant individually or cumulatively.

b. that the Ministry enforce the Lakes and Rivers Improvement Act and better utilize the Conservation Authorities Act to prevent all filling and all building in valleylands as well as modifications to valleys and stream channels.

c. that the Ministry develop and enforce firm guidelines on the flow fluctuations both upstream and downstream from 'peaking dams' including both hydro-electric related facilities and dams used to "flush" effluents.

d. that the Ministry Policy be to oppose and prevent any proposal to raise lake levels which would result in significant impairment of existing natural values.

60) a. that the Ministry redefine "objectives" for future planning exercises so that they(a) need not be quantifiable, and (b) need not be tied to human jobs, dollars earned, or man days of time spent. It is imperative that objectives be definable in terms of any desired end.

1.0 INTRODUCTION

The Strategic Land Use Planning exercise for Northwestern Ontario represents a serious attempt to resolve conflicting policy and to develop a coordinated land-use program for a major region. For this genuinely bold initiative, the Ministry is to be strongly commended.

The ensuing paper has been prepared in response to a Ministry document entitled Background Information and Approach to Policy: Northwestern Ontario. All references to "the document", "proxy policy", or "discussion", unless otherwise noted, are in fact references to this M.N.R. document. The discussion is organized, as far as possible, parallel to the background document, and is intended to be read with it.

We believe that the Strategic Land Use Program is of vital importance for a number of reasons. First, it will guide the types of development, degree of exploitation, and rate of growth over the next 20 years. It will do so over an area of 160,000 square miles. Secondly, the plan will decide upon the final commitment of land in many cases, in that lands, once-developed, are almost impossible to retrieve for other purposes. And finally, the plan will - hopefully - provide the operative resolution to many of the conflicts which exist within the Ministy. Indeed, it will have a considerable influence upon the policies of many other Ministries.

The success of the exercise will depend very largely upon the comprehensiveness of the policy, and upon the ability of the policy to set out priority and precedence for operational decision-making.

With this in mind, we hope that the reader will consider very carefully the recommendations contained herein.

2.0 Urban

2.1 Urban Strategies and Rare and Endangered Species Habitat

Proxy Policy, as currently set out in reference E, defines set growth nodes for the region at three levels: Primate, Strategic A, and Strategic B.

Although definitions are provided for each of the three categories, no attempt has been made to detail the growth or diversification which is being considered for each of the centres; that evidently will be part of phase II.

We feel strongly that such urban growth planning must take into account, and protect, important natural areas; most particularly, threatened ecosystems and the habitat of rare and endangered species. This applies both to townsite expansion and development, and to the industries on which the town is based. The latter is of particular concern since it may affect a much larger area than the townsite itself.

Northwestern Ontario is fortunate in having few species which can be considered as seriously decimated, rare, or endangered, on a provincial or broader scale. However, there are several species of which we are aware, and which may be influenced by urban development strategy: lake sturgeon (*Acipenser fulvescens*), eastern cougar (*Felis concolour cougar*), Wolverine (*Gulo lus cus*), bog adders mouth orchid (*Malaxis paludosa*), the white pelican (*Pelicanus erythrorhynchos*), the bald eagle (*Haliaeetus leucocephalus*) and the osprey (*Pandion haliaetus*). In addition, there is legitimate concern about the implications for woodland caribou, and several ciscoes (discussed in section 9.0).

In the Thunder Bay area, concern has also been expressed about the Least Weasel (*Mustela rixosa*),raccoon (*Procyon lotor*), Le Conte's Sparrow (*Passerherbulus caudacutus*), *Potentilla bippiana*, and Skunk Cabbage (*Symplocarpus foetidus*).

What is perhaps most significant, is that the best prospects for long-term survival of these species occur in northwestern Ontario. In other parts of the province, habitat is generally more degraded, and is certainly subject to more serious cumulative effects: existing population pressures, irreversible trends in habitat, lag-time for decimation, and difficulties in land-use control. Long-term viability for many populations in southern Ontario is very much in doubt.

In northwestern Ontario, by contrast, excellent prospects for survival remain. Habitat is generally superior; localities are less influenced by cumulative pressures (most notably, upstream effects on fish); and governmental ability to control development remains much greater.

It is, in our view, imperative that the long-range diversification and development plans for each of the centres recognize and implement the necessary protection of decimated, rare, and endangered species' habitat. And, as earlier noted, this applies both to the townsites themselves, and to the resource-based industries which may affect the towns' respective hinterlands.

It is crucial, for example, that all remaining sturgeon rivers be protected. Any plan for diversification of industry on the Fort Frances townsite, therefore, must accept the limitations imposed by protecting the Fort Frances river from further deterioration.

Similarly, any proposal to expand forest-based industries at Fort Frances or Red Lake must recognize, and fully protect, the habitat of the eastern cougar. Any proposed forest-industry expansion at Kenora must recognize and protect the white pelican. And any proposed expansion of fishery-based industries dependent upon the Lakes Superior and Nipigon fisheries, must recognize and accept full protection of the threatened cisco populations.

We have found repeatedly that a community's growth and industrial diversification - despite copious statements that it will not happen - leads ultimately to destruction of habitat through incremental and cumulative change, and through continuous growth pressure.

We have also found repeatedly that generalized statements of intent, of the type likely to be forthcoming for the Northwestern growth centres, have been used to justify destruction of important habitat - implications which were not even considered in the original decision.

For all of these reasons, the Federation urges:

1. That no policy decision be made with respect to diversification of industry at any growth node, until the implications - expected and "worst case" - are set out for each of the threatened and decimated species, and their ecoystsems, likely to be detrimentally affected by such diversification;

2. That Ministry policy require - and provide adequate buffer zones to ensure that - no decimation occur of decimated, rare and endangered species, as a result of expansion and diversification within townsites;

3. That with respect to (1) and (2) above, particular attention be paid to white pelican, eastern cougar, bog adders mouth orchid, lake sturgeon, kiyi, blackfin cisco, shortnose cisco, woodland caribou, wolverine, osprey, bald eagle, and SCOL systems (salmonid communities in oligotrophic lakes);

4. That it be clearly stated as Ministry policy that the protection of rare, threatened and endangered species takes precedence over other stated policies to diversify or expand any given industry or townsite.

2.2 Urbanization and Environmental Protection

The discussion concerning urban planning explores briefly the possibility of housing problems and recreational opportunity shortages resulting from rapid industrial expansion and diversification. To these concerns we wish to add irreversible environmental degradation.

Frequently, in the quest for increased job opportunities and tax base, municipalities and municipal politicians find themselves competing with one another to have a proposed industry locate in their town. In such competitive situations, there is a tendency to become preoccupied with incentives and with "here and now" considerations, at the expense of often-serious long range problems.

Occasionally, such industries are developed with little foresight on the community's part - leading ultimately to "boom and bust" situations. This has happened repeatedly in resource-based industries - notably in fisheries, in wood-and-fibre product industries, and in mining industries.

And such "bust" situations often have dire consequences for the natural environment and for the people who depend upon it.

When a "bust" begins, there is a frantic attempt to keep the process - be it logging, fishing, mining, or processing - going at all costs. Water quality protection becomes a lower concern, and permanent degradation may be permitted to keep the process going. Mining operations are allowed to continue, to the point where severe damage results. Forest "harvesting" is allowed to become forest mining, with considerably greater than the sustained yield being cut, and with a myriad of damaging effects. Fisheries are fished down, below the sustained yield level, even to the point where irreversible changes result in faunal composition.

For all of these reasons, the Federation urges:

1. That industrial expansion and diversification not be allowed - much less promoted - until its long term influence on the community has been fully explored and documented;

2. That industries not be permitted to locate:
   (a) until long term viability is documented and ensured. (e.g. a forest product industry is not located until there is documented evidence of adequate and guaranteed wood supply, with a buffer to ensure that the plant need not close);

   (b) until effective contingency plans exist for crisis situations. (e.g. plans of action for water shortages for processing industries);
   (c) until plans are made, <u>before development</u>, for the relocation and retraining of employees in transitory operations (e.g. mines and associated processing facilities);
   (d) until plans for transitory operations, like mines, are designed to yield the maximal long-term benefit to the community, and not simply the "here and now" income, with a "bust" to follow.

2.3 Urbanization Rate & Development of Unsuited Lands

Rapid urban growth has at times reached such frenzied proportions that municipalities abandon environmental standards, allow development of unsuited (e.g. hazard) lands, ignore future agricultural land requirements, and sacrifice park land, simply to maintain the frantic pace.

Our greatest concern in this context, is the pressure for relaxed protection of hazard lands. Repeatedly, municipalities either have acted to reduce protection of hazard lands, or have simply allowed their development by default. Such situations have led to an entire chain of undesirable events, including channelization of rivers, clearing of forested valley lands, widening - and in the process biologcial destruction - of valleys and streams, expensive water control facilities, and expensive (provincially funded) dams and diversions.

We do not honestly see any method of safeguarding such areas through simply controlling growth and industrialization rate. However, we see considerable ease in doing so through the steadfast maintenance of (provincial) standards.

The Federation therefore urges:

1. That the Ministry of Natural Resources, acting through other appropriate Ministries, seek mandatory official plans for each municipality or unincorporated community, by the arbitrary date of January 1, 1980;
2. That the Ministry set and enforce mandatory standards for the protection of hazard lands, including that from all filling and all construction, to the regional storm level;
3. That the Government establish and enforce mandatory per capita minimum municipal park space requirements for all communities in the region;
4. That the foregoing standards not be made flexible, so that municipalities will tend not to apply pressure for specific exemptions.

3.0 Rural Residential

3.1 Proxy Policy

As stated in Reference E, proxy policy is "to condone non-farm rural residential use, excepting for proposed developments or classes 1, 2, and 3 agricultural land; classes 1, 2, and 3 recreational land; hazard lands, sensitive areas, or on strategic aggregate reserves."

With certain qualifiers, the Federation strongly supports the proxy policy. We feel that it offers a real - and vitally important - alternative for those living in northern communities. Specifically, it offers the chance to locate in natural and truly beautiful rural areas, as an alternative to the intensely developed towns and cities.

The exclusions contained in the statement represent important policy in themselves, and are likewise supported by the FON. Many of the problems which have arisen in Southern Ontario - lake pollution, strip development, loss of farmland, shortage of aggregates, mining of prime agriculture lands, and expensive dams - have resulted from the lack of such policy. As we all realize, such exclusions are impossible to activate once intensive growth and industrialization pressures exist. The Ministry is to be strongly commended for recognizing the needs implicit in the proxy policy, and for proposing implementation now.

We feel, however, that proxy policy must be broadened in several ways.

First, we consider it imperative that policy also provide for the protection of buffer areas, around actual exclusion zones. Such buffer areas may or may not be required for agricultural land, but they are essential for sensitive biological areas, for some hazard lands, for recreational lands, and for strategic aggregate reserves.

Without appropriate policy wording, serious problems will inevitably develop. Take for example, a hypothetical aggregate deposit. Indeed, one could take numerous major pits in Southern Ontario as case studies. All will agree that noise and dust from extractive operations are not desirable, and not compatible with residential use - a buffer is necessary. Yet this buffer must be outside the aggregate reserve, and thus cannot be delineated as part of the reserve itself. If adequate buffers are not provided by policy, unpleasant situations will inevitably develop, either with individuals seeking approval for construction, or with residents allowed to build inside what should be buffers.

Similarily, many hazard lands require buffers. For example, steep slopes are hazard lands, and can be so-designated. But the 20 feet of plateau land bordering valleys is not. Yet it is imperative that such a buffer be retained in forest if slow changes are not to incrementally damage the hazard lands themselves.

In the case of sensitive biological communities, buffers are often essential to protect areas from heavy foot traffic, from hydrological changes, from microclimatic alterations, and from a myriad of other problems. The Ministry's sensitive area mapping program delineates buffers in many cases, yet these would apparently not be acceptable - or at least defensible - without an appropriate policy wording.

Secondly, we urge that careful consideration be given to the desirability of excluding development from class IV agricultural lands. As discussed in section 4.1 of this report, there is a strong possibility that some class IV agricultural lands may be required for production. Needless to say, the economic viability of any such operations would be contingent upon substantial blocks of land. The parcelling of property into small units would mitigate strongly against such use.

The Federation therefore urges:

1. That proxy policy be adopted with respect to rural residential development, subject to (2) below;

2. That proxy policy be ammended so as to include protection for adequate buffer zones around recreation lands, hazard lands, sensitive biolgoical areas, strategic aggregate reserves;

3. That careful consideration be given to the desirability of including class IV agricultural lands within the exclusion areas.

3.2 Circum-Urban Buffers

Although not included in specific proxy policy, circum-urban buffers are suggested in the documents' ensuing discussion. Such buffers, it is suggested, might be set aside as no-development areas around designated urban centres.

The basic concept is strongly supported by the Federation.

We believe that many of the problems with which regional planners are faced in southern Ontario stem directly from the lack of circum-urban buffers. Wildlife deficiencies, park space shortages, extremely low perceptual qualities, difficulties in placement of utilities, vandalism, citizen opposition to development, lack of community spirit, and a myriad of other problems can, we believe, be at least partly attributed to the lack of such buffers.

Furthermore, we consider such buffers to be at least as important in northern communities as in the south. One of the greatest beauties of northern towns is the matrix of land-uses and landscapes which occur around and indeed right within some of the towns. This is a quality much appreciated by residents - even those who do not stop to think about what makes the landscape interesting. Yet, with the existing rate of development and with the projected population growth and industrial expansion over the next two decades, the character of these towns seems certain to change dramatically.

Circum-urban buffers have a great deal to contribute to the maintenance of existing perceptual qualities.

It is, in our view, essential that such buffers take a substantive form; that they, in fact be buffers, rather than simply strips in which to locate linear utilities and roads. To retain the perceptual and other functions which such buffers are to fulfill, it is our impression that the buffers should be broad; perhaps an arbritrary one mile minimum is a reasonable guideline.

The inner boundary of buffers should be designed (i.e. located) to provide for some optimal town size within. If the buffer were simply placed around the existing border of buildings within, say Red Lake, the effect would be to simply force a second town to develop outside the buffer. The buffer should be located to allow some infilling of the communities - without being so distant as to make them useless.

Finally, close attention will have to be paid to the development of land-use criteria for buffers. Northern Ontario is fortunate that, for most centres, the surrounding land is Crown property. However, in discussing buffers one is constantly reminded of southern Ontario situations, where landowners have threatened to destroy all aesthetic and biological values of lands unless their development proposals were approved. If buffers are to be effective, then compatible land uses must be defined and enforced.

The Federation therefore urges:

1. That the Ministry adopt as policy, the creation of circum-urban buffers to restrict urban sprawl, and to retain the many values of rural areas in juxtaposition to existing towns;
2. That circum-urban buffers be substantial areas, sufficiently wide to fulfill their purposes, and not simply ribbons of land for later location of linear utilities;
3. That careful consideration be given to buffer placement, so as to provide for some optimal town size within the buffer;
4. That clear land-use criteria be developed, and enforced, which will protect the desired qualities of circum-urban buffers.

3.3 Open Versus Zoned Rural Residential

Tied closely to the subject of circum-urban buffers is the approach to delineating those areas in which rural residential use is to be condoned. One approach (essentially one of action by default) is simply to allow rural residential development anywhere outside the buffers. The other alternative is to limit land availability to low density rural residential areas, retaining other areas in an undeveloped state - essentially, a zoning scheme, but not in the sense of incorporated municipality plans.

The latter is an approach which is more far-sighted, and which protects landscape mosaic. Already referred to in the preceding section, this matrix of developed and undeveloped areas greatly enhances both resident and visitors' perception of community quality.

The second approach also has substantial wildlife implications. Many species have a real, if not quantifiable threshold of human interference, above which they will not remain in an area. By maintaining a mosaic of developed and large undeveloped areas, one greatly increases the prospects for diversity and for viewing opportunities close to urban areas.

Having taken the decision to deliberately create a matrix, one is immediately posed with the question of density. The inexorable trend everywhere is subdivide lands into repeatedly smaller blocks as land values and regional population rise. While the impacts are not as dramatic in repeated subdivision, the effects are just as serious as intensive and complete development at the outset.

We consider it essential that Ministry Policy define a density maxima. Specifically, we would suggest 10 acre minimum size on soils over 4 feet, and 20 acres in other locations.

The Federation therefore urges:

1. That, in the creation of conceptual development philosophies and plans for individual communities, close attention be paid to the potential for a land-use mosaic, and specifically to the desirability of restricting rural residential use to specific (low density) areas.

2. That Ministry policy define rural resident minimal parcel sizes as 10 acres on soils over 4 feet deep, and 20 acres in other locations.

3.4 Lakeside and Riverside Development

The discussion in reference E raises the possibility that cottaging and hunting camps should be treated under rural residential policy. For this reason, we explore it here. However, we must emphasize that the problems associated with shoreline development are immensely greater and much more severe than those associated with developing away from shorelines.

Among the more serious problems associated with riverside and lakeside development in Northwestern Ontario are (1) nutrient loading, (2) perceptual qualities of waterways, (3) destruction of wetlands, and (4) general interference with the land-water interface.

We propose to briefly examine each of these problems individually.

3.4.1 Nutrient Loading

The devastation which residentially derived nutrient loading wreaks on our northern oligotrophic lakes is well known to research biologists, and has been documented (see, for example, Edmondson 1961, 1969).

The effects and extent of the problem have been aptly summarized by Ryder and Johnson (1972); in discussing salmonid communities:

> "Oligotrophic lakes... should be recognized for what they are, swimming pools carved out of granite, with low nutrient tributaries and a cold annual thermal regime. They are capable of having their environment and their communities severely altered - only too easily. Unless further increases in eutrophication and exploitation are brought to a halt, the lakes will be altered within the next three decades and their demise as producers of salmonid stocks may then be irrevocable."

Moreover, these changes are not at all restricted to salmonid communities. They are felt in water bodies of all kinds, whether warm or cold regime, whether shallow or deep, whether large or small.

Commendably, the Ministry of the Environment has developed, and recently refined, a Manual for Calculating the Capacity of a Lake for Development (Dillon, 1974, 1975). Using it, planners can achieve some approximation of the number of cottages or residences which can be located on any given lake, without surpassing threshold nutrient levels at which major changes occur in the lake. In that this represents the first tool which can quantify nutrient loading limits, it is a very valuable tool. However, as the report itself stresses, this manual ignores the equally important concerns of direct fisheries effects, wildlife, and human health. Such other concerns must await the completion of the Lakeshore Capacity Study, and its translation into management principles.

We consider it vital that no substantive deterioration should be permitted on any lakes. As long as this manual must be used, we consider it fundamental that no development should be permitted which would elevate the "level" of any given lake above its present status (i.e. 1, 2, 3, 4 as described on Page 41 of Dillon, 1974).

In particular, SCOL systems which are at or nearing their threshold should be closed to all further development, and stringent attempts should be made to reduce the present loading, in order to retain biological qualities.

3.4.2 Perceptual Qualities of Waterways

One of the characteristics for which northwestern Ontario is most noted, and most justifiably noted, is the wilderness quality which remains on many of its waterways.

In more easterly and southerly areas, one now listens to (justifiable) great lament that waterways and lakes are reduced to little more than ribbons of development. Such ribbons ruin the qualities of the waterways, and do so almost irreversably. Indeed, the development ruins the very qualities which attracted the development at the outset.

One need only talk to any cottager in an intensively developed area to learn about the effects of infilling and intense development; about how it has ruined the majestic and wilderness quality of the waterways; about how it has reduced fishing experience; about how it has ruined the boating and canoeing experiences along undeveloped shoreline; about how it has precluded the opportunity to reach undeveloped areas to commune with nature, to picnic, or to observe wildlife; and about how it has led to the destruction of habitat and decimation of wildlife.

For the permanent resident, these effects are even more important. Bound to the area, the resident is subjected to the effects year-round, and his quality of life is reduced in a very real fashion.

For these perceptual reasons alone, intensive shoreline development is highly undesirable.

3.4.3 Destruction of Wetlands

The importance of marshland to lake ecosystems cannot be stressed too strongly. Two of the most important sport fisheries, maskinonge and largemouth bass, are totally dependent upon marshes for reproduction. The contribution of marshes for fish forage in terms of plant material, minnows, and amphibians is immense. In addition marshes are important to waterfowl such as ducks, rails, and bitterns, to numerous smaller songbirds like marsh wrens and redwinged blackbirds, to reptiles, to amphibians, and to many plant species. And finally, mammals such as deer, racoons, muskrat and moose make extensive use of shoreline wetlands (Lewies and Dyke, 1973).

Development has, in many areas of the province, resulted in substantial losses of such vital shoreline wetlands. In some lakes near major population centres, like Toronto and Thunder Bay, the loss has been almost complete. And even in the Kawarthas - a substantial area - a recent study has revealed losses ranging up to 75% in the last decade alone (Lewies and Dyke, 1973).

Fortunately, the problem is not nearly as serious in the north-western region as a whole. This is largely the result of a lower population and less development, rather than the result of sound planning. Although no statistics are apparently available, there have been important losses, particularly in the vicinity of existing growth nodes. Needless to say, the projected 50% increase in population, the inevitable location of most of this growth near existing centres, and the continuing trend toward increased leisure time, all indicate increasing pressures on these areas.

The destruction, for the most part, stems from two sources. The first of these is the increase in water levels resulting from dams. These may involve permanent raising of the water level,

as advocated by people wishing to develop (a) lands whose shorelines are presently wetlands, or (b) lakes which are presently too shallow for safe navigation.

The second threat, generally more serious, is that of clearing and/or filling of marsh areas by adjacent property holders. Tremendous areas have been lost to these activities, to the point where whole waterbodies have no wetlands.

Although most of the region's undeveloped shoreline is now Crown Land, this is no automatic assurance that marshland will not be destroyed. The pressures to flood and fill already exist, and will unquestionably grow over the next two decades.

The Federation considers it imperative that, to preclude such destruction the Ministry have a clearly stated policy - enforced without exception - which declares that marshland losses will not be permitted.

3.4.4 Land-Water Interface Interference

The land-water interface is of tremendous wildlife importance. This is especially true of the terrestrial component - that narrow strip of land with its naturally complex arrangement of vegetation, rubble, detritus, and topographic relief. Beaver rely on this area for food, as do many muskrats. Many reptiles depend heavily on this interface and on the ability to ascend from the water into covered habitat. Loons rely entirely on terrestrial rocky, wild sites for reproduction. Many songbirds prefer shrubby shoreline vegetation for nesting. Mammals, like deer, racoon, and porcupine, make heavy use of screened areas for access to drinking or feeding locations. And many fish abound where the shoreline is a tangle of fallen trees and submerged vegetation.

Yet many cottagers "improve" their shoreline by cutting out virtually all of the underbrush, by limbing trees as high as they can comfortably reach, by removing submerged vegetation and trees, by cutting the shoreline herbs and grasses, by destroying the rotting logs and other habitat features, and by eliminating aquatic vegetation - in short, by ruining the wildlife values of their shoreline. Some, even after cutting down all the alder brouse, are annoyed at beavers which fell the few remaining trees, attempting to find food.

It is hardly surprising that loons rarely succeed in raising young on many lakes, that beaver populations are reduced, that songbird populations seem to have fallen, that turtles are far fewer, that amphibians have been decimated, that watering mammals are rarely seen and that fishing opportunities have been reduced, all on those lakes which have been intensively developed.

Certainly, there are some prospects for reducing the destruction by education. But experience gained in southern Ontario suggests that far too many people simply take the attitude that the

wildlife should use the next fellow's property.

The only real hope seems to be the retention of a substantial amount of shoreline in an undeveloped state, where wildlife is not subject to the whims of often unthinking individuals.

3.4.5 Recommendations

For all of these reasons, the Federation urges:

1. That Ministry Policy be to develop and implement the management principles from the Lakeshore Capacity Study - as maximum development limitations at the first possible opportunity;

2. That, until the foregoing is in effect, Ministry Policy be to analyze each lake using the Manual for Calculating the Capacity of a Lake for Development before issuing any approval or any lease for property abutting that lake;

3. That Ministry Policy be to oppose or prevent any development which elevates, or seems likely to elevate, the level of any lake above its present status (i.e. Levels 1,2,3,4, as described in the above Manual);

4. That Ministry Policy be to close all SCOL (Salmonid Community in Oligotrophic Lakes) systems, which are at or approaching their threshold limit, to further development, and to seek all possible methods of reducing nutrient loading thereon;

5. That Ministry Policy be (a) to retain the natural perceptual qualities of waterways in the region and (b) to do so by keeping large sections of shoreline undeveloped, by stipulating the retention of shoreline vegetation in leases, and by educational methods;

6. That Ministry Policy be to oppose or to prevent the development under all circumstance, of more than 50% of a lake's shoreline;

7. That Ministry Policy be to oppose or prevent development of all lands adjacent to major shoreline wetlands;

8. That Ministry Policy be to prevent the destruction of any shoreline marshes by filling, by clearing, or by flooding. This policy must be clearly stated and uniformly applied;

9. That Ministry Policy be to strictly enforce the Lakes and Rivers Improvement Act;

10. That Ministry Policy be to seek the retention of natural shoreline characteristics, including shrubby growth, deadfalls, natural herbaceous vegetation, along all developed shoreline.

3.5 Public versus Private Use

The discussion raises, as a possibility, the suggestion that "all public uses should take higher priority than private uses, like cottages and rural residential".

Such a suggestion, if literally interpreted, would mean that no public lands would be available for private use, since all Crown Lands are for public use - if not by direct occupation then by wildlife production, wood production, and so forth.

The view of the Federation is that public uses should normally take precedence when any committal of land to private use is contemplated. Moreover, it is the Federation's position that all lands highly suited to wildlife production or recreational opportunity - including shorelines and marshland as examples - should almost completely be retained in public use.

Since this is inherent in proxy policy (see section 3.1) which is supported by the Federation, no specific recommendation is included here.

3.6 Disposal of Crown Land

3.6.1 Lease versus Sale of Sites

This organization strongly supports the concept of lease in preference to sale of Crown Land.

The Federation is directly opposed to the sale of Crown Lands in Northwestern Ontario. We have witnessed problems of countless descriptions, most notably in the Muskoka, Haliburton, and Georgian Bay areas, which would have been wholly avoidable if lands had been leased rather than sold. The Ministry is so abundantly familiar with such situations that we consider it unnecessary to document examples.

The Federation therefore strongly supports the proposal;

1. That further land disposal occur by lease, rather than by sale.

3.6.3. Lease fees

Reference E raises the concept that lease fees should be sufficient to cover all public costs. The Federation strongly supports such a proposal, because it has significant implications for the protection and quality of the natural environment.

The alternative is in effect, to have the Crown subsidize and thus encourage the development of unsuitable lands. We can see no justification for, in effect, a subsidy to build a long and expensive road to an inaccessible corner of a lake which should remain in its natural state. Nor can we see any justification for, in effect, a subsidy to dredge wetlands, to fill rocky areas deep enough for septic facilities, or to underwrite expansive dams to make adjacent waters navigable.

Almost invariably, any policy not to recover all public costs would have the effect of developing those lands least suited to development and most suited to retention in a natural condition.

The Federation therefore strongly urges:

1. That lease fees be made adequate to recover all public costs.

4.0 Agriculture

4.1 Proxy Policy

> "Proxy Policy for agriculture is to reserve all class 1,2, and 3 land for farming. In Northern Ontario it is also possible that the Class 4 land should be reserved for agriculture. In addition, all viable farm communities and special crop production areas should be kept for agriculture".

Such a principle is strongly supported by the Federation. From our perspective, it simply does not make sense to allow functionally irreversible degradation of food-producing lands, especially in areas which are already heavily dependant upon food importation.

As indicated in the discussion, practically all Class 1,2,3 land is now under cultivation. However, we can envisage situations where class 1,2, and 3 lands are currently not cultivated, and support significant or unusual biological communities. We feel strongly that such situations must be examined individually; that there not be a hard and fast rule either that they will be maintained for wildlife, or that they will automatically be available for agriculture.

Regarding class 4 agricultural land, we feel that a similar wording would be in order. It is our general impression that class 4 agricultural lands are not likely to produce substantial quantities of food, even if they can be made into viable operations. The Federation feels that no activity should be permitted, as a general rule, which would later preclude the possibility of agricultural use (eg: major industrial expansion, or intensive residential use). However, this does not mean that all class 4 lands should be automatically available for agricultural use. We can envisage the possibility that the alternatives - e.g. maintenance in forest cover - may be economically superior; such alternatives should be examined critically before any decision is made to expand agriculture at the expense of forested land.

The Federation therefore recommends that:

(a) as a general principle, proxy policy of reserving class 1,2, and 3 land for farming should be adopted;
(b) any proposal to bring under cultivation unfarmed class 1,2, or 3 lands should be examined individually, to ensure that such a proposal is the most desirable;
(c) as a general principle, irreversible destruction of Class 4 agricultural land should not be permitted;
(d) any proposal to bring under cultivation Crown owned Class 4 agricultural land should be individually and publicly examined to ensure that such a proposal is indeed the most effective use of the land.

4.2 Farming Practises

Given the projected population growth, and the already-heavy dependance upon imported food, the text suggests that "efforts must be made to increase agricultural production from existing acreage". Certainly, it would be difficult to quarrel with such a commendable objective.

Unfortunately, some of the methods which might be used have very serious and very damaging consequences for other desired objectives. In particular, some techniques can create large "sterile" areas for wildlife, and can severely impair water quality throughout extensive systems.

We are, in particular, concerned about:

(a) drainage proposals - especially those involving channelization,
(b) stream-side land-use practices,
(c) massive use of fertilizers,
(d) fence row practices,
(e) pesticide and herbicide usage.

We fully realize that such practices may be viewed "jurisdictionally" from a very narrow sense by some employees of the Ministry of Agriculture.

Yet each of these practices has major implications for the natural environment and for wildlife. We believe that the Ministry of Natural Resources must take a stance and an active role in each.

4.2.1 Drainage Proposals

Drainage Proposals must be examined very carefully because of their cumulative implications for water quality and for the types of ecosystems which waterways can support. This is a particular concern in Northern areas where:

(a) fast disappearing SCOL communities remain viable for the present at least,
(b) the few remaining high quality habitats exist for sensitive species like sturgeon.

We believe that any tile drainage proposal should be examined critically, and disallowed where it seems likely to have an even cumulatively significant effect on SCOL systems or unusual sensitive-species habitat.

We also feel strongly that drainage proposals involving stream channelization must be halted. Such practices, as is well known and documented (Wilkinson, 1973), grossly degrade the immediate ecosystems, and often begin progressive downstream deterioration that extends for miles, not only destroying the stream and river system, but also greatly affecting the lake ecosystem into which the streams feed. Once channelized, stream beds and ecosystems are extremely difficult to restore, and functionally permanent in their effects. We feel strongly that new channelization or "ditching" of streams should not be allowed under almost any circumstances.

Where channels already exist, we believe that the Ministry should adopt practices, policies, and procedures to restore such streams to the best practicable condition. As a first step, the repeated ditching - necessitated by poor management practices - must be ended. Then streamside management practices must be implemented which will:

(a) reduce slumping and erosion, and thus obviate ditching, and
(b) restore some of the biological values destroyed by past ditching.

The Federation fully realizes that such practices would require dialogue with other Ministries (notably Agriculture), with municipalities, and with property owners. And such changes would of course have to be developed in considerable detail. But the direction must be adopted as Ministry policy, as a first step, if there is to be any hope of retaining - much less restoring - the excellent biological and recreational attributes of northwestern agricultural areas.

The Federation therefore recommends:

(1) that Ministry Policy be to review all tile drainage proposals, and to oppose any such proposal where it is likely to have an even cumulatively significant effect on SCOL systems or unusual species habitat;
(2) that Ministry Policy be to prevent or oppose any proposal to channelize a hither-to unchannelized stream or river;
(3) that Ministry Policy be to seek practices, policies, and programs to restore already channelized streams to the best practicable condition.

4.2.2 Stream-side land use practices

Streamside management practices have considerable consequences on the quality of streams, not only on the immediate property, but also for often-great distances downstream. When soundly managed, streamsides can cool the water, serve as filters, reduce silt loading and maintain oxygen, and even provide fish and fish food habitat. But where carelessly managed, stream banks can ruin water quality, cause severe siltation, cause oxygen depletion, destroy fish habitat, eliminate fish food and encourage sludge worms, and even contribute to steady erosion of valuable soils.

The practices of clearing land to the very edge of streams; of killing all "weedy" vegetation along stream banks; of disposing wastes over banks; of maintaining a steep slope on stream banks to maximize arable areas; and of allowing cattle free access to trample stream banks and beds are all understandable, particularly by individuals who do not realize the consequences.

Many feel that, since the waterways in northwestern Ontario are in such good condition, there is not nearly the reason for concern that there is in southern areas. This is an unfortunate misconception. Waterways in farming areas of the Northwestern Region (e.g. Slate and Whitefish Rivers) are as poor in quality as anywhere else in Ontario.

We feel strongly that a fresh approach must be taken:

(a) to prevent further development of these problems, and
(b) to begin reclamation of existing problem areas.

The Federation, having considered a number of alternative mechanisms urges:

(1) that the Ministry develop and adopt as policy, a document setting out the manner in which stream sides should be managed.

(2) that the Ministry analyze the extent of existing problems, and in concert with the Ministry of Agriculture, develop a programme for action.

4.2.3 Fertilizer usage

Our concern stems from the effect of nutrient laden runoff entering streams and eventually the highly sensitive oligotrophic lakes. As noted elsewhere (sections 3.4.1 and 10.3) the damage wrought by such enrichment is severe, and functionally irreversible.

As with the preceeding concern, many people tend to dismiss the significance within the Northwest, thinking that the "few" farming areas cannot possibly be of significance in a huge region of lakes and forest. Again, this is an unfortunate misconception. In the first instance, entrophication has already seriously affected waterways. Waterways near major urban centres - demographically, the most significant waterways - already show signs of serious overloading. Secondly, the seemingly limitless collection of significant waterways is a mere myth. The SLUP document itself identifies a mere 650 - 800 trout lakes, all of which are considered essential to supply of recreation.

The region is not limitless, and existing fertilizer usage already contributes to problems in the region. Massive usage, such as might be proposed to stimulate production, could have disastrous ramifications.

We feel strongly that the SLUP programme must address itself to the extent, nature, and trends of fertilizer usage.

The Federation therefore urges:

(1) that the Ministry examine status and predictable trends within all waterways which are receptacles for agriculturally-derived chemical fertilizers, in order to develop logical Ministry Policy with respect thereto.

4.2.4 Fence Row Policies

Fence Rows are of immense value biologically. Yet despite this widely acknowledged fact, many fence rows are destroyed annually, and many more are simply never established.

The significance of fence row loss is not as great in northwestern Ontario as in southern regions, but the implications are none-the-less important. The areas in the Northwestern Region which have the greatest fence-row void are also the areas with the highest populations; it is in these very areas where the biological and social values of fence rows are most needed, and most wanting.

We commend the Ministry on current programmes to encourage fence row establishment. We believe that this programme should be significantly upgraded, perhaps through the production of a new booklet for circulation to all farmers in the region.

And secondly, we believe that the Ministry should be much more aggressive in its attempts to educate the Ministry of Agriculture. The values of fence rows are clear, and we believe that Agriculture's Policy of subsidizing fence row destruction should be terminated.

The Federation therefore recommends:

(1) that Ministry policy be to encourage and to assist landowners and occupiers to establish complex fence rows, particularly in those areas which have been largely cleared and which have high populations;

(2) that Ministry Policy be to continue and to increase pressure for reversal of the outdated Ministry of Agriculture policies which encourage fence row destruction.

5.0 Commercial Fish, Fur, and Wild Rice Production
5.1 Commercial-Fishing
5.1.1 Policy

At the outset, we must emphasize that it is impossible for anyone to properly assess the statements or proposals contained in the section on commercial fishing, given the limited information contained on the planning documents.

In order for anyone to assess the proposals, detailed information must be available:

(1) on existing licenced lakes, including species, harvests and trends in yield and faunal composition,
(2) detailing the "18 million pounds of sustainable potential harvest", - where, how the figures are arrived at, implications for the fish faunas, and implications in concert with sport fishing.

Without such information, anyone making a response would be acting irresponsibly, on the basis of simple emotion.

The Federation will therefore refrain from commenting on the proposals, except to recommend:

(1) that no policy for increased yields be adopted until and unless the afore-discussed data is publicly reviewed, and until and unless such proposals are demonstrated to be biologically and socially sound.

5.1.2 Comments on the Text

Although the Federation will not comment upon the suitability of proposed policy, we do feel obliged to comment upon several aspects raised in the text.

A) Mercury Contamination

The first of these relates to mercury contaminated fish. We believe, frankly, that the text reflects an irresponsible approach to this problem.

> "While in some instances this mercury may have originated from industrial activities, more generally it has come from natural sources". (p 11)
>
> "Under the present standard, concentrations of greater than 0.5 parts per million in fish flesh render it unmarketable for human consumption in Canada. However, standards of acceptability vary throughout the world and alternative markets for such fish exist elsewhere". (p 11-12)
>
> "Nonetheless, there are instances where the jobs of Indians and tourist operations may have been jeopardized by this mercury (contamination)". (p 12)
>
> "The problems facing the commercial fishing industry are many, and a few of them more important are as follows:... problems of marketing mercury contaminated fish". (p 47)

And finally, the matter is wholly ignored in the approach to policy discussion.

It is clear that some Ministry officials, at least, view mercury contamination simply as a marketing problem, not as a problem in itself. To whit, the text identifies heavily contaminated fish, not as unfit for human consumtion, but simply as unmarketable for human consumtion. It then simply suggests that we should sell the fish elsewhere.

The text also suggests jobs "may have been jeopardized", when it is well known that fisheries have been rendered useless. The text ignores the question of health, and ignores absolutely the immorality of accepting pollution 'because it is only the ecosystem which is contaminated'.

The problem, as far as this organization is concerned, is not one of marketing contaminated fish, but rather is one of contaminated fish.

We realize that the problems which exist are already in place and not quickly solvable. But we believe that the Ministry should treat the problem responsibly.

In particular the Federation recommends:

(1) that the Ministry cease to produce such misleading statements in any future documents;
(2) that the Ministry treat the problem of mercury contamination as a contamination problem and not as a marketing problem;
(3) that the Ministry <u>not</u> permit, much less encourage, the taking of mercury contaminated (i.e.> 0.5 ppm mercury) fish for sale outside Canada;
(4) that the Ministry, as policy, close all waters to fishing which produce fish approaching or exceeding the level of impingement;
(5) that the Ministry as policy, formulate a long-term plan for the use (or non-use) and restoration of mercury contaminated waterways;
(6) that the Ministry, (in concert with other provincial and federal agencies), take the initiative to develop and set in place any necessary programmes to alleviate the problems which Indians, tourist operators, and any others are experiencing as a result of mercury contamination;
(7) that no further expansion of existing facilities or construction of new facilities which use mercury in any process, be permitted unless and until the operator can and will achieve zero discharges of mercury.

B) Conflict with Sports fishing

To this organization, it is largely irrelevant whether the fish are taken by commercial or by sport fishermen; the concern to this organization is that the combined harvests are not so great that they exceed the sustainable yield.

C) Inactively fished licences

The text suggest that one of the more important problems facing the commercial fishing industry is the fact that 30 percent of all licences are not fished actively.

Frankly, we have difficulty perceiving how this is a problem to the industry, although we can see how some MNR officials who measure their success in terms of exploitation,might perceive this as a problem.

From the Federation's perspective, a situation where all licences were not intensively fished is highly desirable, from both an environmental viewpoint and a social viewpoint.

From an environmental viewpoint, we believe it highly desirable that a significant number of fish faunas be protected from the stresses which intensive commercial fisheries produce. Although it is usually impossible to predict the long-term efforts of intensive fishing pressure or the uses of unfished communities, we believe there to be genuine insurance value in such fall-back populations.

From a social viewpoint, the merits are much more clear, and good examples of soluable problems exist. Such unfished populations serve as "insurance" and "alternatives" where problems develop. If for example, a specific fishery must be closed down, as happens occassionally, because of compositional changes, because of collapse or because of a pollution problem,

one has two options. Either the men are thrown out of work, or they are transferred to other fisheries. If all fisheries are being actively fished, then men will likely be out of work. And before that actually happens, the fishery is likely to be so intensively fished as to make rehabilitation very prolonged or impossible. Unfished licences provide an important buffer to be used in contingencies, and to prevent severe economize and social disruption.

The current problems at White Dog and Grassy Narrows Indian Reserves provide ideal case histories. Mercury contamination of the English-Wabigoon River systems has rendered existing fisheries useless. As a result both of the contamination and of the effect on tourism, a very substantial number of fishing and guiding jobs have been lost. Welfare has skyrocketted from $2,000 a year before recognition, to about $12,000 a month. In addition, the main protein source for the reserves has been destroyed, or rendered so dangerous that it cannot be safely consumed. Attempts to fish in other lakes have thus far met with little success, and understandably, with great hostility from fisherman and lodge owners on other lakes. If there were unfished licences, how much simpler would it have been to provide a safe food source, to eliminate the consumption of mercury, and to prevent the wholesale collapse from a self-sustaining to a welfare community? Our submission is that it would not only have been possible, it would also have been relatively simple.

The Federation therefore urges:

(1) that the Ministry re-examine the apparent preoccupation with production and strive toward optimized benefits rather than maximized production;

(2) that the Ministry accept as desirable, the existence of unfished or under-fished licences; and

(3) that the Ministry adopt as policy, the retention of a substantial number of areas in an unfished state, for use in contingencies, such as pollution situations, and recovery periods for over-fished populations.

5.1.3 Ciscos

Dramatic changes in cisco populations have occurred throughout the Great Lakes basin during recent years, and there is now considerable concern for the very survival of several species.

The Kiyi was endemic to the Great Lakes basin, and was restricted to the deeper waters of Lakes Ontario, Huron, Michigan, and Superior. "It has been greatly reduced or extirpated in the remaining Lakes". (McAllister, 1972)

The Blackfin Cisco was found in lakes Huron, Michigan, Nipigon, Superior, Ontario, and perhaps north and west in a few lakes to Lake Athabasca (but the later records may not represent the same species). All great lakes populations, except those on Lake Nipigon, have become extinct, or nearly so. (McAllister, 1972)

The Shortnose Cisco was limited to Lakes Ontario, Huron Michigan, Superior, and Nipigon. Although once an important commercial species, it has become exceedingly rare in Lake Ontario, largely disappeared from Lake Michigan, and greatly reduced in Lake Superior. It is rare in Lake Huron and its status in Lake Nipigon is unknown (Scott and Crossman, 1975).

Despite this, and the dramatic decimation of other ciscoes in other lakes, no mention is even made of protecting ciscoes in proxy policy for commercial fishing. Indeed, all the policy discussion examines is increasing yield.

Clearly, Ministry Policy must address itself to the protection of the ciscoes from further decimation, and aim toward their restoration and permanent survival.

The Federation therefore urges:

(1) that Ministry Policy examine and deal specifically with regulation of the ciscoes' fisheries within the region;
(2) that the foregoing policy call specifically for the full protection of viable populations and habitat, for all species which have been seriously decimated in other parts of the Great Lakes Basin;
(3) that the Ministry seriously examine the advisability of a moratorium on fishing grounds and methods likely to take Kiyi, blackfin cisco, and shortnose cisco until proper management programmes for these species are in place and until the species' viability is assured;
(4) that the Ministry undertake such measures as are necessary to lessen the impact of this programme upon the commercial fishermen which presently rely upon ciscoe fisheries.

5.2 Bait Fishing

As in the section on commercial fishing, there is no data by which one can critically assess the proposed policy for bait fishing. Without such data, there is no evidence that the natural systems can support the proposal, or that the social implications are desirable.

Much more fundamental than the question of 'unharvested potential', however, is the very advisability of permitting - much less promoting - virtually unrestricted interchange of fish between acquatic systems.

Three important concerns immediately come to mind:

1) undesirable species introduction,
2) introduction and transmittal of diseases and parasites, and
3) destruction of gene pool identity.

The consequences of undesirable species introductions have long been widely recognized within the scientific community (see for example 'A Symposium on Introductions of Exotic Species.') The introductions can be severe predators, decimating natural fish populations. They can eliminate game fishes. They can cause desegregation of newly developing species (see for example Regier 1968). They can spread rapidly throughout entire watersheds. They can virtually destroy the recreational sports fisheries. And they can do so functionally, permanently, and irreversibly.

The greatest source of concern for such introduction is the transfer of bait from system to system. The distribution of alewives is well known. The introduction of smelt through much of the Great Lakes and the destruction of both lake trout and ciscoe fisheries is clearly documented. Introduction of smelt to Lake Simcoe and their effects in the brief decade in

those lakes are well known. Similarly, smelt have been introduced to the Northwestern Region's Eva Lake, and are undoubtedly spreading down the French River System. Smelt have reportedly also been established in the Hudsons Bay drainage of Kenora.

Such introductions and their disastrous effects (sometimes permanent and often very expensive) are inevitable, so long as transfer of bait fishes exist. Anyone who thinks otherwise need only consider a bait fish operation. First, exotics are often difficult to identify, especially at a glance. Couple this with masses of writhing, wiggling, or darting fish all dumped together. Then consider time; what bait fishermen is prepared to examine each individual fish, when his income depends upon large quantities of fish in minimal time? And how many people have the patience to attempt to isolate one or two specimens from large quantities of fish? Add to this the fact that some bait fishermen or their employees are simply "in it for the money" and are not concerned, or even aware of the potential implications. Consider all this,and what are the chances of preventing every last undesirable specimen from slipping through into the fishermen's bucket. Very little indeed!

Then there is the concern of disease and parasite transmittal. Bait fish tanks and operations provide ideal conditions for disease transmittal. Tremendous quantities of fish are gathered from diverse locations. They are dumped together in a seething mass. They are subjected to often-elevated water temperatures, ideal for incubation, development, and transmittal. Their mucous protection is often disturbed or removed, optimizing disease and parasite transfer. Nets wipe mucous from fish to fish. Oxygen conditions are variable,and general stress is considerably elevated, again idealizing disease and parasite spread. And the sold bait fish are, finally, subjected to very elevated temperatures

and depleted oxygen before introduction into the lake system.

The potentials of such disease transmittal have recently been highlighted by Michigan's hatchery programme. Myxosoma Cerebralis there was suddenly found in some 2.6 million hatchery-raised fish. Fortunately, it appears that the disease was recognized, and the fish destroyed just before release. Ontario's own Fish Culture Section Chief has stated that "the spores are very difficult, if not impossible, to eradicate". Michigan Resources Biologist Jack Bates has described the implications: "We knew the spores were in the watershed... A stream with any soil other than rock or gravel on the bottom is virtually impossible to disinfect". It takes little imagination to envisage the problems which Ontario is inviting.

But perhaps the greatest concerns are the implications for natural gene pools. Any population long isolated from breeding stock of other populations develops distinctive characteristics. These characteristics vary widely, and may include highly valued traits, of evolutionary and even economic significance. Dwight Webster, for example, has been scouting back country systems and has apparently found brook trout populations markedly superior to those occurring in southern regions. Behnke (1972) has made repeated and impassioned pleas for the inventory and protection of these gene pools. Introduction of exotic species, and especially of juveniles of the same species, can rapidly cause a loss of the distinctiveness of a gene pool and can even cause desegregation of sibling species (see e.g. Regier 1968). The lack of clearly documented examples of such permanent and irretrievable losses, directly attributable to introduction, seems more likely to result from the lack of study than from any good fortune.

For all of these reasons, the practise of bait fish transferal is dangerous anywhere. But it is especially dangerous in Northwestern Ontario. First, the Northwestern Region contains

some of the best fish faunas in Ontario. It contains the least disturbed SCOL habitat and the few such systems which appear likely to still retain distinctive gene pools. Secondly, the region contains the only habitat for several ciscoes over which there appears to be any real control, and where there remain good chances of protecting the species from decimation or extinction, (see sections 9.2, 5.1.3). Thirdly, the region contains the divide between northern and southern drainages. If there is to be any hope of retaining the quality of northern drainages, and the distinctness of their faunas, we must prevent further introduction of exotics across the divide. And finally, the bait fish industry is not essential to the provision of angling opportunity. Angling can continue quite unabated, using lures and other types of bait. In those situations where anglers feel that they must use bait fish, then they should attempt to catch adequate bait within the lake they will be fishing, using self-transported minnow traps.

For all of these reasons, the Federation is directly opposed to further expansion of the bait fish industry. We furthermore believe that the Ministry should adopt a policy and programme to phase out bait fish operations where fish are, or are likely to be, transported from one water body to another.

The Federation therefore recommends:

(1) that the Ministry not adopt a policy of increasing the bait fish industry, at all;
(2) that the Ministry adopt a policy and develop a programme to phase out existing bait fish operations in which specimens are, or may be, transferred to water bodies from which the specimens did not originate; and
(3) that the Ministry seek regulations (and enabling legislation if necessary) requiring fishermen to destroy left-over bait fish and to dispose thereof upon land, rather than releasing them into water bodies.

5.3 Commercial Fur Trapping

5.3.1 Policy

As in the sections on commercial fishing and bait fishing, there is little data by which one can critically assess the proposed policy for trapping.

In order for anyone to assess the proposal, one must have detailed information:

(1) on existing trap lines, including species, harvests and trends in yield, and
(2) detailing the annual production below which trappers are purportedly harvesting

The Federation will therefore refrain from detailed reaction except to recommend:

> That a public review of existing trapping policies - including detailed data - be made, and that a policy which is biologically and socially sound be formulated.

5.3.2 Comments on the Text

The text discussion seems to reflect a determination to take as many specimens as possible; there is no discussion whatever about protecting populations, but there is a great deal of discussion about increasing the numbers taken.

To suggest that trapping should take a portion approaching the maximum harvest is to suggest that yields - and livelihoods - should fluctuate, often violently, as do many fur-bearer populations.

A policy to exploit furbearers to the fullest extent possible is neither biologically nor socially sound, as was likewise indicated in the commercial fisheries section. Take for example an intensive harvesting operation, dependant upon high yields. What happens when furbearer populations decrease, either for natural reasons or from overharvesting? The initial result, almost invariably, is to trap that much more intensively, decimating populations even further. The second effect is social disruption, sometimes violent, with people out of work. And the third result may be a so-decimated wildlife population that it takes years to recover.

It makes a great deal of sense,both biological and social, to harvest at seemingly low levels - at or below the minimum annual production.

To emphasize, the goal should <u>not</u> be to maximize harvest, but rather to maximize social benefit by ensuring a continuing harvest.

5.4 Wild Rice Production

The proposal to increase wild rice production by 200 percent to 400 percent is interesting, and if viable, might provide some real benefits for native people.

But the preoccupation with increased production for production's sake, which is reflected in the text, is not shared by this organization.

We feel strongly that wild rice production should continue on the basis of taking from the wild, and not on the basis of a highly managed production system with high mechanization and intensively managed and altered "cultivation" areas.

For this reason, the Federation would not support policy which called for:

(1) transformation of the natural habitat through draining of lake areas;
(2) transformation of habitat by destruction of water lily and cattail areas;
(3) spraying to eliminate disease or insects.

The Federation furthermore supports current policy of restricting picking rights to registered Indians. A great deal of the interest and charm associated with wild rice is the cultural aspect of its collection and the long history of traditional picking. This perception is valued greatly by those who utilize wild rice and even by those who do not. We can see no justification in destroying this cultural link simply to increase production for production's sake.

One final area which must be emphasized, is the Ministry's concern -shared by the Federation - regarding the progressive destruction of habitat through cottage developments and water level fluctuation resulting from dams. We concur that such habitat loss should not occur.

The Federation therefore recommends:

(1) that Ministry policy oppose any cottage development, Hydro dam, or other proposal which would substantively impair wild rice habitat;

(2) that Ministry policy toward wild rice production strongly retain the traditional and cultural aspects of production;

(3) that, in respect of recommendation (2) Ministry policy not call for
- (a) broadening of picking rights to non-Indians,
- (b) substantive alteration of habitat,
- (c) spraying to eliminate disease or insects,
- (d) the use of non-traditional technology for harvesting or production;

(4) that Ministry policy call for a careful analysis of new strains and their full implications before any replacement of existing stands is undertaken.

6.0 Forestry

6.1 General Policy

The basic intention embodied in proxy policy - of increasing the benefits to northwestern Ontario, of increasing jobs, and of increasing the contribution to the Provincial economy - can certainly be understood and appreciated.

As with many proxy policies, however, it is easy to concur with basic intentions; but such policies should not be approved and become justification in themselves, without considering the implications. It would, for example, be desirable to create jobs by logging in the area of, say, Atikokan. But if that were adopted as policy, and to become the justification for logging Quetico Provincial Park, without having examined the consequences at the outset, then planning procedures would be very weak indeed. In short, consequences must be considered in evaluating proxy policy.

In the SLUP document there is very little information to enable anyone to evaluate the consequences, and hence it is very difficult to critically assess proxy policy. What little information and informed views we have been able to collect (see section 6.5) suggest that we have already seriously overcommitted our wood supply.

6.2 Cutting Practices

First, foremost, this organization believes that any lands subject to forest cutting must be treated on a sustained yield basis.

Secondly, any forest cutting operations on Crown land must be planned, conducted and controlled to ensure the perpetual maintenance[1] within the cyclical context of tree production of the natural environment. This means that operations must protect waterways from destruction and degradation, must protect soils from progressive loss, and must ensure the retention of biological diversity and quality (i.e. a complex ecosystem, not a pine plantation).

It is our distinct impression that current forestry techniques, as practised in the northwestern region, are pre-occupied with excessive wood production and little concerned with the protection of waterways, the perpetual maintenance of soil layers, or the maintenance of current faunal and floral diversity.

The Federation therefore urges:

1) that Ministry policy stipulate that any cutting operations on Crown land must be planned, conducted and controlled to ensure the perpetual maintenance (within the cyclical context of tree production) of the natural environment. This means for example, that operations must protect waterways from destruction and degradation, must protect soils from progressive loss, and must ensure the retention of biological diversity and quality.

6.3 Rare and Unusual Wildlife

Cutting should not take place in the proximity or the habitat of rare or unusual wildlife, unless it can be demonstrated beyond any doubt, that cutting is harmless or beneficial to the species.

The species about which we are currently most concerned are:

a) eastern cougar
b) white pelican
c) caribou
d) lake sturgeon.

The Northwestern region provides important habitat for each of these species, and the habitat for each could be severly impaired or destroyed altogether by cutting in or near the habitat.

A) Eastern Cougar

Although no specimens of eastern cougar have been taken in the region, there have been a substantial number of reliable sightings in a locale near Lake-of-the-Woods; it is our understanding that the Ministry has this information well documented. The species is exceedingly rare (only one other locale in Ontario) and apparently highly sensitive to human intrusion into its habitat. It seems likely that cutting activities would render the habitat unsuitable. The Federation recommends that a moratorium on all cutting and issuance of any cutting approvals, be established over the currently mapped cougar habitat, and that a surrounding buffer area of at least 10 miles, be established . This moratorium should remain in effect until the cougar habitat is more accurately delineated, and until a full management programme is developed which sets out the tolerable activities in the vicinity.

The ten mile size is an arbitrary fisure, and will undoubtedly

seem large to some. But the figure does have a reasonable basis for suggestion. First, the actual habitat is likely to be significantly larger than has thus far been documented. This is almost invariably the case with rare, secretive species. Secondly, the cougar is a high-level carnivore capable of travelling considerable distances, and undoubtedly compelled to hunt over a broad area. Thirdly,the cougar is extremely secretive, and apparently highly sensitive to human activities. When considering a buffer, one must consider the enormous sound foot print created by continous logging activities. Finally, one must fully protect the habitat, yarding areas, and migration patterns of the deer on which cougar depend.

The expected argument that logging is necessary to maintain the deer population on which cougar feed, has not been demonstrated. Certainly, cutting can - not necessarily does - increase deer populations, but logging can easily so-alter other aspects that cougar will not remain.

The Federation therefore urges:

(1) that a moratorium be established immediately on all cutting activities and the issuance of approvals for cutting in the presently mapped eastern cougar habitat and in a surrounding buffer area of at least ten miles. If water surfaces are involved, or other evidence suggest the necessity, the buffer should be appropriately larger; and

(2) that the Ministry of Natural Resources, through the proposed Endangered Species Committee, establish a management plan for the eastern cougar habitat, to which all cutting licences, approvals, and activities must comply.

B) White Pelican

The Northwestern Region, as is described elsewhere, contains the only Ontario colony of the white pelican.

Although the prime threats to this species appear to be pesticide accumulation and direct human interference, logging remains a concern.

This includes any cutting activities which:

(1) would be within direct sound or sight of the colony,

(2) would abut or disturb feeding activities (i.e. near waterways in which the birds feed),

(3) would impair the water quality and particularly the clarity in pelican feeding areas.

The Federation strongly recommends:

(1) that the Ministry immediately map an exclusion zone in which logging will not be permitted:

(a) within direct sound or sight of the colony, at any time,

(b) on forest areas abutting waterways in which the birds feed,

(c) to interfere with streams or occur on slopes near waterways, so as to prevent any reduction in water quality or clarity;

(2) that the Ministry issue no approvals for cutting within

a twenty mile radius of the colony until the afore-discussed zone is mapped and approved by the proposed Endangered Species Committee.

C/ Caribou

Continued survival of healthy caribou populations must, we believe, take higher priority than wood production.

We make no pretense at having expertise in caribou management; the Ministry has considerably greater expertise in this respect than does the Federation.

We feel strongly that this expertise should be put to use in the development of a management plan for the caribou. If this management plan allows for some specific, restricted, or controlled types of cutting within the caribou habitat, then other considerations aside, cutting should be permitted but only within the context and limitations of that management plan.

In particular, we are concerned about the populations north of Lake Nipigon. These populations have in recent years been subjected to considerably greater pressures than formerly, and as of the last winter, even to intrusion by snowmobiles.

A substantial portion of the habitat is currently mapped as future cutting areas 1974-1991.

We are concerned that logging practices within the area, and indeed within the Trout Lake area as well, may not be conducted within the context of caribou habitat, but simply in the context of wood production.

Until specifications are developed, setting out types, limits and controls on cutting in caribou habitat; and until these are approved by the Wildlife Branch and implemented, we feel strongly that no cutting should be permitted within caribou habitat.

The Federation therefore recommends:

(1) that the Ministry of Natural Resources develop specific and detailed guidelines concerning all relevant aspects of logging within caribou habitat, that these be approved by the Wildife Branch and implemented;

(2) that all licences and cutting approvals be made conditional to the observance and execution of the guidelines urged in recommendation (1). The necessity of a performance bond should be considered carefully in this context;

(3) that until the guidelines referred to in recommendation (1) are developed, approved, and in effect, no cutting be permitted within caribou habitat.

D/ Sturgeon

As noted elsewhere, the Federation is deeply concerned by the steady decimation of lake sturgeon throughout Ontario. That concern is shared by Dr. D. McAllister, Curator of Fishes at the National Museum, who classifies the species as decimated (McAllister, 1973).

We are concerned about the implications of proposed exploitive activities on the species habitat - particularly on spawning habitat. Sturgeon spawn in well agitated water, and since their adhesive eggs must cling to rocks and logs (Scott and Grossman, 1974), they are very sensitive to siltation of spawning grounds.

As such, any logging activities in the vicinity or upstream from sturgeon spawning beds would be of concern.

We consider it imperative that the Ministry complete detailed mapping of sturgeon spawning beds before any further upstream cutting is permitted. Immediate attention should be given to those rivers which drain lands scheduled for cutting over the next decade. We further feel that protection of spawning beds must take priority over production of wood. Wherever logging practices will not (as opposed to cannot) be adequate to protect spawning beds, then cutting must not be permitted.

The Federation therefore urges:

(1) that the protection of sturgeon habitat and particularly sturgeon spawning beds must take priority over the production of wood;

(2) that logging activities be permitted in the vicinity or upstream from sturgeon spawning beds only if the logging practices are adequate to fully protect spawning beds;

(3) that the Ministry rapidly complete mapping of sturgeon spawning beds, with special priority to those areas scheduled to be cut over the next two decades.

6.4 Provincial Parks and Park Reserves

6.4.1 Cutting in Provincial Parks and Park Reserves

The acceptability of logging in provincial parks has once again been raised, at least indirectly in the SLUP documents.

This matter has been the subject of long and detailed discussions by many authors, and it is not our intention to repeat these here.

Suffice it to say that commercial logging activities are extractive in nature and are recognized as being incompatible by International Parks Standards (IUCN, 1969), particularly for parks which are supposed to fill the biological purposes of natural environment and wilderness parks.

The Federation strongly supports the exclusion of commercial cutting from provincial parks, and endorses the preliminary Administrative Policies of the Ontario Provincial Parks System (Lee, 1975). The Policy for both wilderness and natural environment parks calls for exclusion of commercial logging, the former completely, the latter excepting only those situations where some cutting is required to fulfill environmental, recreational, and educational objectives. To repeat, the Federation strongly supports these management policies.

Unfortunately, there is as yet no similar document setting out definitive management policies for Park Reserves. And, a number of these areas are apparently covered by timber licences. Indeed, a number are mapped, perhaps inaccurately, as being within the proposed cutting areas 1974-1991 (Maps 25, 27 SLUP). It is ludicrous to designate park reserves, allow the features of biological significance to be removed, and then to designate them as parks. Clearly, logging must be terminated within all park reserves.

The Federation therefore recommends:

(1) that the (preliminary) Administrative Policies of the Ontario Provincial Parks System, with respect to logging in provincial parks, be adopted, implemented, and respected;

(2) that commercial cutting be terminated in all park reserves, at the earliest possible opportunity, and not after the areas are already logged over; and

(3) that the ultimate control on cutting activities in provincial parks be placed with the Division of Parks, and removed from the Timber Branch, during 1976.

6.4.2 Designation of Parks and Park Reserves

Major conflicts have often arisen between logging interests and park interests. This is hardly surprising, since the most significant and biologically productive areas tend also to be those lands containing the highest-value timber.

Some commercial foresters seem to feel that timber production should take first priority, since 'parks are composed of any old vegetation and can be designated almost anywhere to fulfill recreational purposes'. But to take such a view is to ignore the biological purposes which we consider to be the most important function of both Wilderness and Natural Environment Parks. We will not repeat these here, since they are explored in considerable detail in the Wilderness in Ontario document (Addison and Bates, 1975) and more recently by Sullivan and Shaffer, (1975).

The ecological, geographic, pysiographical, edaphic, biological, limnological and geological requirements for fulfillment of biological functions - as well as the not-unimportant recreational functions - are frequently far more limiting than those for timber production.

This is not to suggest that Park Planners should have first choice of land, in complete isolation of timber production considerations, leaving the "pickings" to timber planners. It does mean that Parks should not be relegated to a few areas, chosen as a priority lower than timber production.

We firmly believe that the role and priority given to park planners must be considerably elevated in the practice of land-use allocation. The past situation, where lands were committed to timber production before parks designated, or where dazzling dollar values have been used to justify the irretrievable destruction of biological values, must end.

Certainly, the immediate dollar value of many areas as parks will not compare with the dollar value of timber, but social and biological values of park ecosystems in perpetuity are immeasurable.

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Certainly, the immediate dollar value of many areas as parks will not compare with the dollar value of timber, but social and biological values of park ecosystems in perpetuity are immeasurable.

We sincerely believe that parks must constitute a substantial and comprehensive representation of our finest natural ecosystems.

The Federation therefore recommends:

(1) that further timber allocations should not be committed until a comprehensive parks system plan is completed and until those park areas are set aside for park purposes;

(2) that lands set aside for park purposes in either the immediate or distant future, not be logged; and

(3) that park values take considerably greater weight and should generally take precedence over timber production in the allocation of land-use.

6.5 "Full Allowable Cut"

The proxy policy, as stated in the Approach to Policy (p.116) "is to utilize the full allowable cut..."

The Federation views this as a dangerous and highly undesirable policy.

We certainly understand the desire to produce every possible dollar of merchandizable wood, and we understand (and share) the desire to maximize employment benefits.

However, experience has shown the danger - extreme danger - in developing a system which relies on full yield of any biological resource.

In developing a system which utilizes the full allowable cut, a large work force and substantial capital outlay are, obviously, established. We all know that living resources are prone to fluctuations in abundance, to disease and parasites, to a variety of calamities, and to unforseen situations.

What happens if this full utilization system is developed, and yields turn out to be underestimated? What happens if a proposed cutting area is found to contain a rare or endangered species? What happens in the event of major fires, or windthrow? What happens if a proposed cutting area is found to contain an important biological community that would be destroyed by logging? What happens if park needs are considerably underestimated? and intensive wear or user conflict develops? And what happens if logging practices are found to be inadequate to protect the environment from permanent degradation - that intensity of cutting must be reduced?

All of these are foreseeable and quite likely possibilities. Indeed, a growing number of foresters are, right now, expressing

fears that the province has overcommitted wood supply; that between 2000 and 2020, mills will be forced to close for a want of wood of any species. We are already finding that we don't know how to regenerate cutover areas to produce as much wood, even the next time around. There is already insufficient poplar and birch to meet commitments for new and existing mills in Thunder Bay!

But what happens in these situations? Often, people will be thrown out of work, resulting in massive social disruption in areas so-dependent upon forestry income. Massive - and tremendously expensive and damaging - spray programmes would likely be tried in other situations. Intensive attempts will be made to open up, and destroy, park reserve areas and indeed parks themselves. In others, logging will simply be allowed to continue and to seriously degrade the environment. Massive environmental modifications at substantial expense and with wholly unknown long-term implications may be tried in others. Parks will simply have to endure the wear or fail to fulfill their purposes. And after these attempts people will still be thrown out of work.

All of this indicates that a policy of utilizing the full allowable cut is not advisable if one is trying to maximize social benefits or to protect the natural environment.

However, one can greatly increase the social benefit and the margin of safety to protect environmental quality, by developing a system which uses substantially less than the allowable cut and which provides for such contingencies.

Without examining carefully the likelihood of such contingencies, and the extent to which they might affect output, it is very difficult for us to suggest the degree of "buffer" which should be built into the system, and the form of an unused buffer. For the sake of discussion we suggest an entirely arbitrary figure of at least 10 percent.

We strongly advocate that close attention be paid to developing

a more objective buffer, which will indeed be adequate for all anticipated contingencies.

This buffer should not include timber on lands committed to uses where logging is incompatible (e.g. parks). But it should take the form both (a) of a buffer within the licences to be cut, and (b) of specific areas for use in contingencies only.

The Federation therefore recommends:

(1) that proxy policy to utilize the full allowable cut should not be adopted;

(2) that adopted policy should include a substantial buffer to provide for all manner of contingencies;

(3) that considerable attention should be given to development of a buffer size which is adequate for such contingencies; and

(4) that the buffer should take the form both of:

(a) allowances within the areas to be cut, and
(b) discreet areas to be cut only in contingencies, such as an extensive burn elsewhere, but not include lands committed to non-exploitive purposes.

6.6 Utilization of cut versus utilization of required cut

The SLUP documents, quite rightly, raise the suggestion that policy intent should be to utilize the"allowable cut that is consistent with all the needs of the client group - not simply to utilize the cut".

This seems rhetorical unless one realizes that some individuals measure their success in terms of production and not in terms of fulfilling a need.

We fully concur that the cut should not be permitted - much less encouraged - to exceed that required for client needs.

The Federation therefore recommends:

(1) that Ministry policy be to utilize only that section of the allowable cut which is consistent with the needs of the client group.

6.7 Timber Allocations

As the SLUP documents point out, allocation of timber is proceeding even as the Strategic Land Use Planning Programme continues, and virtually all of the land south of 51° is already committed.

We are deeply concerned that such allocations are proceeding before park requirements are established or designated, and without public examination.

As indicated elsewhere (section 5.2.2) we believe further allocations should be forestalled until full park system plans have been formulated and implemented.

And secondly, we believe that public notice and, if desired, hearings should be conducted before approval is given to allocate new lands to logging. It is not our intention that a hearing should necessarily be conducted on every timber licence, or change or transfer of timber licence. But we do believe that new lands should not be allocated for cutting until the public has been notified that the Ministry is contemplating such action. We suggest as mechanisms, the Ontario Gazette and a local distribution newspaper. If requested by members of the public, hearings should be conducted - by a specially appointed advisor to the Minister, from outside the Timber Branch - and recommendations thereon made to the Minister.

The Federation therefore recommends:

(1) that a new Ministry policy be adopted for committing Crown lands to logging, which calls for:

(a) public notice, via the Ontario Gazette and a local distribution newspaper, that the Ministry is contemplating the commitment of specified (and mapped) lands to cutting;

(b) public hearing(s), if requested by any individual or organization, into the advisability of committing such lands to cutting. A report thereon should be submitted to the Minister; and

(c) decision by the Minister, or Committee of Cabinet if necessary.

6.8 Reforestation

6.8.1 Reforestation Commitment

The SLUP documents indicate that the Branch proposes to increase production from the current annual level of about 2.5 million cunits to about 7.3 million cunits, while the output target (regeneration money) is presently fixed at 3.5 million cunits.

As earlier noted, (section 5.5) we do not believe that policy should be to utilize the full allowable cut, but rather should provide a considerable buffer for contingencies.

It is obvious, however, that the output target must be increased to at least keep pace with the level of utilization. We feel adamantly that situations should not be allowed to develop where there is a reduction in the standing crop. That is, one does not wait until a shortage develops, but one regulates the allowable cut on terms of regeneration. If the output target is limited to 5 million cunits, then the allowable cut should never be allowed to exceed 5 million cunits.

The Federation therefore recommends:

(1) that Ministry policy should at no time permit allowance cut to exceed the approved output target; and

(2) that the Ministry tie the allowable cut to output target minus the buffer allowed for contingencies.

6.8.2 Reforestation Practices

Current forest regeneration practices vary considerably from area to area and vary widely in their biological effects.

For the most part, these activities are concerned with maximal wood production. They are only secondarily - or little - concerned with retention of natural biological systems and diversity.

We have neither the space nor the time to review and comment in detail on each of the regeneration techniques.

However, we feel strongly that the Ministry should undertake a careful review of its forest regeneration policies. In particular, we believe that an important goal of forest regeneration should be to retain in perpetuity the biological diversity, complexity, and quality.

The use of scarification in proximity to waterways, for example, should be terminated altogether. Similarly, the destruction of all dead wood, which provides essential habitat for many species, should be examined critically. So should the expansion of pine, spruce, and poplar plantations and the 'weeding out' of all little valued species, despite their importance to wildlife.

The Federation therefore recommends:

1) that the Ministry undertake a critical re-examination of forest regeneration practices; and
2) that the basic philosophy of the Ministry's regeneration programme be to retain biological diversity, complexity, and quality, in perpetuity, as well as to produce wood.

6.9 Allowable Cut determination

There are many aspects of allowable cut determination which one might wish to examine. The most important, raised indirectly by the SLUP documents, is the cutting cycle.

The document indicates, perhaps inaccurately, that current allowable cuts are determined on the basis of a 60 year cycle. We feel strongly that the allowable cut should be determined on the basis of forest maturity, not simply on the basis of wood production. We fully realize that there is no magical point at which a forest is "mature" and that seral factors enter into play in many habitats. But we believe strongly that forest management practices should maintain a complete array of habitats; and this necessitates forest maturity. The figure of 60 years is too short for most such ecosystems.

The Federation therefore urges:

1) that Ministry policy be to determine allowable cuts on the basis of returning a forest to maturity, and simply on maximizing wood production.

7.0 Mining

Basic Proxy Policy, to strengthen the contribution of minerals to the economy, by expanding extraction and increasing processing, seems entirely reasonable.

There are, however, four areas of prime concern - 3 of them raised in the SLUP text which we wish to examine:

1) withdrawal of lands,
2) parks and park reserves, and mining,
3) pollution standards,
4) mine rehabilitation.

7.1 Withdrawal of Lands

The text of the SLUP documents suggests that Ministry policy should prevent the withdrawal of lands from mining before exploration is complete.

Although it is not made explicit, this seems to be an urging that lands not be designated for Nature Reserve, Park, or Park Reserve purposes unless they are shown to contain no minerals of any significance.

In order to appreciate this, one must understand the situation which the advocates wish to create. Exploration is almost completely conducted by private prospectors, who are free to examine virtually all Crown land not already staked. If a prospector locates a deposit of any significance, he will stake a claim. So long as the prospector has taken all necessary actions in staking the claim, and so long as the holder keeps up the taxes thereon,the claim remains his. Once an area has been claimed, the only practical method by which the Government will close the claim is by purchasing it. Needless to say, political and budgetary considerations are such that acquisition would very rarely occur before the area is defaced.

This scenario suggests that "preventing the withdrawal of lands before exploration is complete" means, almost without exception, that mining takes first priority and that parks will not be created on sites that contain any economically exploitable deposits - regardless of their quality as parks.

The Federation disagrees strongly with such a suggestion.

Parks-particularly Nature Reserves, Natural Environment, and Wilderness parks - are designated to preserve living representatives of our natural ecosystems in perpetuity. They are a permanent

committal to future generations. For this very reason our parks must include representatives of each natural ecosystem, must include areas of complete habitat for unusual, rare, and endangered species, must include habitat which has not already been despoiled by careless activities, and must include ecosystems which are complete or not highly susceptible to the influence of man in other parts of the watershed.

In short, parks often require a location for which there is no substitute. And they represent a permanent committal to future generations.

Mines also have specialized locational requirements, granted. But their locational features tend often times, to be a matter of economics (i.e. there are other deposits generally available, though less economical to exploit). Most importantly, mines represent a short-term use, of little value to society 50 or 100 or 500 years hence. If a mine, in its process, destroys the biotic qualities of what should be a park, then society loses in perpetuity.

This does not mean that park planners simply take their choice of areas in complete ignorance of mining values, leaving "the pickings" to mining interests.

What it does mean, is that lands should and must sometimes be committed to park use, even if that means foregoing exploitation of deposits within the park.

The Federation does not urge that Park Planners rush ahead and have parks designated before they are examined.

But the Federation does recommend:

1) that Ministry Policy encourage the designation of parks even if exploration is incomplete; and
2) that in general, priority of allocation should be given to those land uses, like parks, which will benefit society in perpetuity.

7.2 Parks, Park Reserves, and Mining

The report states that one of "the obvious conflicts for mining (is) parks and park reserves - as long as these are exclusive uses there will be conflict".

This seems to suggest, at least indirectly, that the Ministry should re-examine its policy of excluding mining from Provincial Parks.

The Federation supports current Ministry Policy and strongly opposes any change therein. The presence of extractive activities within any park is contrary to international park standards (IUCN 1969). Such activities are wholly incompatible with park philosophy, with park use, and with the objectives of provincial parks: to protect natural environments for the people of Ontario in perpetuity.

When due consideration has been given to other needs, the principle of exploiting non-renewable reserves wherever they occur is a sound one, but the matter is not as vital to the public interest as some people suggest. Availability of non-renewable resources is very much a matter of balance between costs and alternatives, and very few minerals are in such short supply that the unavailability of specific deposits represents a threat to society's well-being. Indeed, if this were the case, society's well being would be considerably more threatened than those same advocates suggest, and the inevitable exhaustion of the supply would represent a problem of major proportions. (Goodwin, 1975).

The Federation therefore recommends:

1) that current Ministry Policy of closing Parks and Park Reserves to mining activities and claim staking be continued.

7.3 Pollution Standards

Another of the supposed conflicts for mining, raised in the Approach to Policy report is "unnecessarily restrictive or variable pollution standards".

Although this area of jurisdiction actually falls with the Ministry of the Environment, the matter is highly relevant to the Ministry of Natural Resources' Policy discussions, since it affects both the extraction of minerals, and the natural resources which MNR must manage.

The statement seems to argue for relaxation of the requirements for environmental protection. This suggests that society in general should bear the costs and impacts of a mine's pollution - quite a departure from the principle that the polluter should assume the cost of cleaning up his pollution.

Furthermore, the suggestion - both here, and in the Advisory Committee Report where it originated - suggests that current standards are set too high, without any indication of the relaxation which should occur, or why.

Very serious pollution can result from mine operations. Indeed, a number of highly trained specialists in the field view current standards and criteria as being entirely too weak. Our present polluted conditions are no more than the sum of such lax controls in the past.

The Federation therefore recommends:

1) that the Ministry of Natural Resources not seek relaxation of current pollution standards; and
2) that the Ministry of Natural Resources seek strengthened standards wherever and whenever current standards are found to be inadequate for the total protection of natural ecosystems.

7.4 Mine Rehabilitation

The subject of expanding extraction is discussed at length in both background and proposed policy discussions. But surprisingly, no attention is directed to the rehabilitation of worked out mines, overburden and spoil-heaps, and work areas.

Fortunately, this subject is not a major concern with some of the larger mines, which are taking a responsible approach of the restoration of such areas. But this is not universally so and it is certainly not the case with some of the smaller mining operations.

Abandoned mine sites, of course, pose a special problem.

We do not propose to discuss in detail the type of rehabilitation which should occur at mine sites,since such a discussion could in itself fill a book.

We do however, believe that a high priority - at least as high as expanding extraction - should be assigned to full rehabilitation of all mine sites and associated facilities, once extraction is completed.

The Federation therefore recommends:

1) that the Ministry assign high priority to the full rehabilitation of worked-out mines, overburden and spoil heaps, and mine-associated work areas.

8.0 Recreation - A Comment on Ministry Approach to Wildlife and Parks

We are deeply concerned by the Ministry's basic philosophical approach to wildlife, fisheries, and parks, as reflected in the Strategic Land Use Planning documents; they are all discussed simply as aspects of Recreational Policy.

Far more than a matter of semantics or organization, this approach has serious consequences for Ministry Policy, and dangerous potential consequences for our fisheries, wildlife, and parks system.

In the document, wildlife, fisheries, and parks are viewed exclusively for their immediate potential for exploration.

Dealing first with wildlife, there is no discussion whatever of non-exploited species. Threatened, rare, and endangered species are not even mentioned. Moose,deer, and caribou, are the only species examined. No attention - nor any policy - is even suggested for the 99% of species which are not directly exploited.

Similarly, fisheries are considered only for the narrow perspective of producing man-days of recreation. This is not to suggest that recreation should not be considered. But when recreation and protection of trout waters are the only areas treated in policy, the policy is lacking in the extreme.

Finally, parks are treated only as a means to provide recreation; their biological functions are all but ignored in policy discussions. Indeed, the recreational paradigm is largely responsible for what can only be described as the diatribe against wilderness parks. If this narrow-sighted view is logically extended, parks will be selected and managed for their recreational function only, to the severe detriment of the far-more-important biological functions.

We believe adamantly and recommend:

1) that Wildlife be treated by Wildlife Policy, of which recreation is a part; that fisheries be treated by Fisheries policy, of which recreation is a part and that parks be treated by Parks Policy, of which recreation is a part;

2) that Wildlife Policy and fisheries policy address themselves to far more than the exploitive aspects and exploited species. The approach should, fundamentally, be one of protecting the resource rather than simply of producing game.

9.0 Rare, Threatened, and Endangered Species

9.1 Policy

Rare, threatened, and endangered species and ecosystems are not treated by the SLUP documents, nor is any policy suggested for these entities.

We feel strongly that policy should be provided, that it should be explicit and unequivocal, and that it should be treated separately from Fishery, Wildlife, and Park Policies. While the subject would seem to fall naturally within the three broader policies, the significance and priority make separate treatment essential.

Specifically, we believe that Ministry Policy should place the protection and encouragment of rare, threatened and endangered ecosystems, and of rare, threatened, and endangered species, in a first priority position. This aspect of priority, we believe is particularly important when a multiplicity of different, and sometimes conflicting, policies are being formulated. It is quite conceivable, for example, that policy encouraging the production of timber or policy to stimulate mineral processing, may come in conflict with the goal of protecting the eastern cougar ecosystems or the white pelican islands. Certainly, such situations must be examined individually, but where conflicting policies arise, there seems to be a consensus that the protection of endangered ecosystems and species should take precedence.

Before any programme can effectively deal with endangered ecosystem or species protection, considerable documentation and biological analysis must be undertaken. Appropriate management policies must be formulated, lands designated, and plans implemented. We fully realize that much of this information is as yet unavailable. But we consider this a first priority

objective, into which all possible man-power and funds should be allocated - even at the expenses of other existing programmes.

We realize that the Ministry has committed itself to some of this documentation and that some work is proceeding as this response is written. We support the work that is being done. But we consider it wholly inadequate, especially in light of the ongoing land use commitments - commitments which are ng made now, without any real idea of reserve requirements for the future.

The Federation therefore recommends:

1) that Ministry create separate policy for the protection of rare, threatened, and endangered ecosystems, and of rare, threatened, and endangered habitats;

2) that Ministry policy place the protection and encouragement of rare, threatened, and endangered ecosystems and habitats in a first priority position, taking precedence over other policies in the region;

3) that Ministry policy be to develop:

   a) a reserve and wilderness area system plan incorporating each of threatened and endangered ecosystems of the Region, and
   b) management plans for each of the rare, threatened and endangered species of the Region,

   by 1980;

4. that Ministry Policy assign considerably greater funds for the undertaking of recommendation 3, even if this necessitates reduction in other Ministry programmes;

5. that Ministry Policy forestall any further commitment of lands and any habitat-destroying activities, in the known area of threatened and endangered species, until the plans in recommendation 3 have been formulated and implemented.

9.2 Species of Concern

Concern has been expressed, from time to time, about a considerable number of species known to occur in the Northwestern region. Fortunately, the information which has been accumulated to date indicates a real cause for concern for a relatively few species. This does not mean that all other species are in a healthy, stable situation. Indeed it is quite possible that some are in a state of considerable jeopardy which is as yet unrealized.

The following species are simply those for which legitimate concern exists:

1. White Pelican
2. Eastern Cougar
3. Wolverine
4. Least Weasel
5. Caribou
6. Lake Sturgeon
7. Kiyi
8. Blackfin Cisco
9. Shortnose Cisco.

The White Pelican occurs in Ontario at a single colony in the Lake-of-the-Woods area, some 40 miles from Kenora. (Ranford 1971; Vermeer, 1971). Such colonies are highly sensitive to human interference, as evidenced by their alarming decline; in the last 2 decades alone, 10 have disappeared, and only 26 more remain. (Vermeer, 1971).

The Eastern Cougar is known from a considerable number of reliable sightings in localized Lake-of-the-Woods habitat; and a similar site near Dryden. Although reports have identified the cougar in the Lake St. Joseph - Red Lake area, we cannot evaluate their authenticity. Only one other locality occurs in Ontario, and a few similar sites have been reported from other provinces. The cougar appears to require undisturbed conditions with extensive deer habitat; the reproduction rate and habits of this animal suggest extreme rarity and high sensitivity to interference by man.

The Wolverine is a widely distributed and relatively uncommon animal under the best of conditions. But increasing concern has been expressed by trappers, by research specialists, and by the Canadian Wildlife Service, all of whom find steady reductions in the species.

The Woodland Caribou, although found over a considerable area, are very restricted in numbers, appear to be highly sensitive to habitat change, and in some locations are subject to harassment by man, and wholly unregulated hunting by some Indians. The effects of development within their Lake Superior habitat and of proposed logging within the Lake Nipigon area raises considerable concern for the future of the colonies.

The Lake Sturgeon has been severely depleted over the vast majority of its range, including much of its Ontario habitat. Owing to the exceedingly late maturity (20+years), the effects of habitat modification may not appear until well advanced and irreversible. Once decimation occurs, particularly through overfishing, recovery takes many years.

The Kiyi was endemic to the Great Lakes basin and was restricted to the deeper waters of Lakes Ontario, Huron, Michigan, and Superior. According to McAllister, (1972), it is declining in Lake Superior and in greatly reduced or extirpated in the remaining lakes.

The Blackfin Cisco was found in Lakes Huron, Michigan, Nipigon, Superior, Ontario and perhaps north and west in a few lakes to Lake Athabasca, (but the latter records may not represent the same species). All great lakes populations except those in Lake Nipigon have become extinct, or nearly so (McAllister, 1972).

The Shortnose Cisco was similarly limited to Lakes Ontario, Huron, Michigan, Superior, and Nipigon. Although once an

important commercial species, it has become exceedingly rare in Lake Ontario, has largely disappeared from Lake Michigan, and is greatly reduced in Lake Superior. It is rare in Lake Huron, and its status in Lake Nipigon in unknown (Scott and Crossman, 1975).

It is not the intention of the foregoing discussions to identify all of the concerns, nor to formulate detailed policy. Such is clearly a major task, which should certainly be undertaken as soon as possible, since it bears heavily upon other aspects of Ministry Policy.

In the interim, the Federation recommends:

1) that Ministry Policy call for the complete protection of remaining habitat, including especially breeding and spawning areas, for:

    a) White pelican
    b) Eastern cougar
    c) Wolverine
    d) Least weasel
    e) Woodland caribou
    f) Lake sturgeon
    g) Kiyi
    h) Blackfin cisco
    i) Shortnose cisco

   until detailed management plans are developed and implemented for these species; and

2) that Ministry policy call for a moratorium on the fishing and keeping, of Kiyi, blackfin cisco, and shortnose cisco, until the status of these species is clearly documented and until effective management plans for the species, if necessary, are implemented.

10.0 Fisheries

10.1 Sports Fishes and unexploited species

Current policy discussions deal only with those fisheries which are directly exploited, either for commercial purposes, or for recreational purposes. We fully realize that this results from the Ministry structure.

However, we are inclined to feel that policy should be more embracing, including not only those fisheries subject to direct exploitation, but also the tremendous number of fish faunas which are not subject to human exploitation.

The Federation recommends:

1) that Ministry Policy be to protect all fisheries (whether exploited or not) from further deterioration, unless there is no alternative, and the proposed action is clearly more beneficial to society than the protection of the fish fauna. Ministry policy should be to oppose any activity or modification which would result in permanent impairment or destruction of a fishery.

10.2 Sport Fisheries Policy

Proxy Policy, as suggested in the documents, "is to meet all the anticipated demand (for sport fishing) in Northern Ontario".

This is certainly an enviable target. But we are inclined to feel that Ministry Policy should be defined in terms of protecting the resource from habitat destruction and depletion, rather than in terms of providing recreation.

If one's policy were defined solely in recreational terms, then operational personnel could face considerable difficulties, as could the resource. Indeed, such a past approach has contributed to the depletion of many fisheries.

Take, for example, the following hypothetical situation:

> Fishing pressure mounts, in keeping with policy to stimulate population growth and tourism.
>
> Overfishing, resulting in a slow depletion and in a steady reduction in fish size, is found to be occurring.
>
> Policy is "to meet all anticipated demand".
>
> The one sound course of action is to reduce fishing.
>
> Local tourist operators do not want a closed season, or a more restricted season, or a reduced catch limit, since this will discourage tourists.
>
> Some local fisherman do not want further restrictions, since they are seeking the recreational pass-time of fishing rather than a large catch.

Most fisheries' managers will agree about which course of action should be taken. But, given a defined policy to meet all anticipated demand and given an uncomfortable political situation, what will happen?

Take as another example, the same situation, but with one

difference:

> Another course of action exists - to plant hatchery stock, which will increase production, but alter the faunal composition and destroy the distinctivness of the gene pool.

Given a policy defined in terms of meeting demand, and given an uncomfortable political situation, what course of action would be followed? Invariably, the situation would be extremely awkward for fisheries' managers. And, there is little doubt in our mind that, almost invariably, the decision would be made to permit stock decimation or to destroy gene pool distinctiveness.

In order to prevent such occurrence,the Federation urges:

1) that Sport Fishery Policy be defined in terms of protecting fish faunas, rather than simply in terms of recreational demand; and
2) that Ministry Policy be to prevent decimation and gross transformation of sport fishery faunas, in order that biological diversity and quality be retained, and in order that anticipated recreational demand can be met.

10.3 SCOL Systems

Salmonid Communities in Oligotrophic Lakes (SCOL) systems are covered by the recommendations of preceeding sections. (10.0 and 10.2),. However, since these complex systems are extremely sensitive, and since they are experiencing steady depletion throughout their range, FON proposes that SCOL systems be treated by special policy.

Considerable concern has been raised about the trends and future of SCOL systems both at and since the SCOL Symposium (Loftus and Regier, 1972). It is not our intention to re-examine these concerns here, since they have been well documented and since they are eminently clear to MNR staff. But we do wish to emphasize:

1) that Ontario's SCOL systems are among the best anywhere,
2) that Ontario contains SCOL systems which are in such location and condition that their prospects for survival are excellent, if Government Policy is to protect them,
3) that Ontario's SCOL populations are showing a steady decline in both number and quality as a result of both habitat destruction and overfishing, and
4) that the incidence and degree of overfishing are steadily increasing, largely the result of increased snowmobile use for winter fishing.

Clearly, SCOL systems warrant policy treatment with a seriousness approaching endangered species.

The Federation therefore recommends:

1) that Ministry Fisheries Policy deal specially with SCOL systems;
2) that Ministry policy be to prevent any action which would have or could reasonably be expected to degrade SCOL systems, or cause gross transformation therein. The only policy taking precedence over this should be the protection or encouragement of threatened and endanagered species;

3) in particular, that Ministry Policy be to restrict fishing in SCOL systems to a level such that depletion or compositional degradation will not occur; and
4) that Ministry Policy be to re-examine its fishing regulations, on a local basis at least every three years, to ensure that depletion does not occur.

11.0 Wildlife

11.1 First-order Policy

Please see the comments in section 7.0. To reiterate, we believe that policy should be defined in terms of protecting and encouraging wildlife for its own sake as well as for its recreational benefits - not simply for its recreational benefits.

It is our view that first-order policy should be to protect the present diversity and abundance of wildlife, and to encourage the production of all species of wildlife which are not harmful to man, irrespective of their "recreational value".

11.2 Wildlife Viewing Policy

This organization considers wildlife viewing to be one of the most important aspects of Ministry wildlife policy. This stems from a considerable number of areas:

a) The very major contribution to tourism: A great many people select northern Ontario as their destination for the single reason that it is perceived as natural or wilderness land. The potential for wildlife viewing comprises a major component of that perception.

b) Viewing constitutes a major form of recreation: Although we do not have statistics available, there are many people who spend a considerable amount of time watching wildlife. They may not call themselves naturalists, and they may not take a lengthy trip to seek out a particular species, but it seems reasonable to suggest that almost all of the population spends some time on any outing watching, and appreciating the local wildlife.

c) Incidental viewing: One can attach no dollar value to the importance of wildlife viewed by those in their back yard, by those out for a walk, or by those involved in a multitude of other activities. Certainly no one can assign a dollar value to the perceptual importance of "simply knowing that the wildlife is around". None-the-less, incidental wildlife viewing seems to have a very major influence on people's perception of their environment, on their "quality of environment", and indeed on their quality of life.

It is therefore disturbing that the SLUP documents treat non-consumptive uses of wildlife almost as an after-thought. Unfortunately, this is the only conclusion which one can reach from an examination of the text. First, the contribution of wildlife viewing - even to tourism - is completely ignored in Natural Resource Development and Use, although the contribution of hunting is explored rather carefully. Secondly, wildlife viewing is entered as a section under recreation policy and ignored under Tourism Policy. Thirdly, tourism policy is equated to "Non-resident Hunters". Nothing else is even mentioned.

Finally, proxy policy for wildlife viewing consists simply of a nebulous statement about "a significant increase in opportunities for viewing wildlife".

The intent of the policy statement is not at all clear, particularly as one attempts to convert it to an operational or decision-making form. Yet such an ability is essential if policy is to have any meaning at all.

The Federation therefore urges:

1) that Ministry policy be to preserve wherever possible the natural diversity and abundance of wildlife for viewing purposes, particularly in proximity to urban areas;
2) that the Ministry consider the desirability of a policy which would end the consumptive use of wildlife in proximity of highways and important viewing areas, in order to maximize wildlife viewing possibilities; and
3) that Ministry Policy call for the rehabilitation of worked-out mine areas, and cut-over lands with techniques which will maximize their wildlife production and wildlife viewing opportunities.

11.3 Hunting Policy

The Federation has no intention of addressing itself to the ethics of hunting in this document. Despite what anyone may say, the Federation has not adopted a position in opposition to hunting.[1]

Nor is the Federation particularly concerned, at this time, about whether resident hunting should take precedence over non-resident hunting.

What does concern the Federation - and concerns it deeply - is the ability of the resource base to sustain the proposed increase in hunting pressure, and to continue to sustain the higher-trophic-level predators (NB- timber wolves and eastern cougar.)

Disturbing reports already indicate that significant sections, particularly of moose habitat, have been so over-hunted that serious depletion is occurring. Since these views have come even from within the Ministry, we have every reason to accept their accuracy.

This being the case, the concerns about effects of greatly increased hunting seem more than justifiable.

The Federation therefore urges:

1) that Ministry policy be to control hunting so that population levels at no time fall below maximum sustained yield;
2) that Ministry policy be to control hunting in order to ensure an adequate resource base for both timber wolf and eastern cougar populations.

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[1] excepting (a) hunting in provincial and national parks, sanctuaries, and nature reserve areas,
(b) hunting, hunting techniques, and hunting intensities which jeopardize either threatened species or the resource base.

12.0 Provincial Parks

12.1 Total Parks System

Essential to any discussion of the total park system is a concise understanding of the purposes and goals which the system is supposed to accomplish. There are, of course, many different objectives and purposes held by different people. But to the Federation, two basic goals are paramount.

One is recreation. Well recognized and often discussed, this purpose is an important fuction of provincial parks. But it is not the only purpose, as implied by the almost exclusive coverage given it in SLUP documents. Recreation is, in our view, entirely secondary in importance to "biological purposes".

Biological purposes include the protection of representative ecosystems and their dynamic natural processes; the perpetuation of natural islands in which evolutionary processes can continue; the continuation of ecosystems within which high trophic level predators can continue; and, the retention of the rich floral and faunal diversity which Ontario presently enjoys. To detail these functions would require many, many,pages and a level of technical discussion which is beyond this submission. But the most important single realization and concept is the following:

> Wilderness areas, appropriately placed, sized, and managed within the context of Ontario's park system, offer the only system where Ontario's faunal diversity can be retained in perpetuity. They offer the only system whereby natural evolutionary processes can continue. And, they offer the only possibility for the protection of species in more than an ephemeral fashion.

Unlike recreation, these biological functions cannot be fulfilled in substitute areas, they are globally significant, and, once lost, they will never be retrieved. Biological functions, therefore, are far more important than recreational functions, and pose <u>the</u> most important design constraint upon the park system.

Clearly the SLUP documents - which view parks almost exclusively for their recreational function - are seriously deficient.

The perspective is vital. It influences the total system perceived, the priorities of park establishment, the services and facilities provided, and most important, the lands chosen as parks. If the system is designed primarily for its recreational attributes, then severe and irretrievable losses will occur.

In our view, the provincial parks system for the region should be designed and implemented, from a biological perspective primarily, and a recreational perspective secondarily.

It is not our intention to lay the system out in detail in this paper. But we do wish to draw the reader's attention to the Wilderness In Ontario Proposal, in whose preparation this organization participated. And we wish to draw the readers attention to The Biogeography of The Megazoo, a recent paper examining carefully the basic principles within which a reserve park system must be designed.(Sullivan and Shaffer, 1975.)

If the biological purposes are to be fulfilled, and if protection of endangered species is to be anything but ephemeral, then Sullivan's concept must be employed. And it must be implemented through the documentation and conceptual work of experts like Hills and Maycock.

The Federation therefore urges:

1) that goal statements for the Provincial Park System include both recreational and biological functions, and set the latter as being of paramount importance;

2) that Ministry policy call for a comprehensive Park System within the region: adequate to serve the biological purposes of the park system, designed in accordance with concept of Sullivan and Shaffer (1975), and; implemented through the work of experts like Hills and Maycock;

3) that Ministry policy call for adequate provincial park space to satisfy the recreational demands of the region;

4) that the Ministry re-examine the adequacy of natural area sizes proposed by the Parks Division, since these appear totally inadequate for biological purposes in light of calculations by Addison and Bates (1975) and by Sullivan and Shaffer (1975).

12.2 Near Urban Parks

Proxy Policy is to provide Near Urban Parks close to population concentration of 60,000 or more. Parks are to be 500 - 2,000 acres, with a minimum standard of 20 acres/1000 population. Under these criteria, parks would only be established, in the region, near Thunder Bay.

This information is provided by the documents, which then places a whole series of questions about type, size, and desired facilities, without ever addressing itself to the purpose which the parks are intended to fulfill.

It is our understanding that Near Urban Provincial Parks are intended to:

a) provide an opportunity for residents of an urban - and hence "unnatural" - area to visit, appreciate, and become immersed in a natural environment; to provide an area where people can appreciate the natural features and biota which is typically lacking or grossly degraded in urban areas, and
b) to retain a natural, complex, interacting biological system in close proximity and hence contributing to urban areas.

Cognizance of the foregoing purpose is of fundamental importance to any discussion of Near Urban Parks, their need, their location, and their types of facilities. Yet these purposes were totally lacking from the discussion documents. It is therefore hardly surprising that many SLUP responses have contained suggestions totally inconsistent with Provincial Park Policy.

This organization would, of course, like to see more Near Urban Parks, located near communities considerably smaller than 60,000 people. However, given the question of priorities with which one is constantly faced, and given the realization that Crown Lands capable of satisfying the purposes of Near Urban Parks generally exist within ready travelling distance of Northern Communities,

the Federation cannot presently support Park Policy to include smaller population centres.

The SLUP-raised question of constant minimum size for parks in smaller communities is therefore largely redundant. However, that question, and a later question about the types of facilities seem to suggest that Near Urban Parks aim to serve as amusement or intensive recreational facilities.

This organization feels adamantly that the Provincial Parks system should not incorporate either amusement activities and features or intensive organized sports facilites. Quite the contrary, we believe that Provincial Parks are areas in which the basis for visitor experience is the experience of the natural environment.Playground facilites, sports fields, amusement centres, together with those facilites which involve great impairment or transformation of the natural environment, do not belong in provincial parks. They belong in municipal parks and private-sector projects, which should be funded accordingly. The broadening of the provincial parks system to include amusement and sports facilities would constitute a subsidy and underwriting of municipal responsibility. We do not support such a broadening, because it will confuse the purpose of Provincial Parks in the public's mind, because it will decimate funds available for natural area acquisition, and because it will ultimately result in the compromise of those significant natural features which provincial parks were originally intended to protect.

The Federation therefore recommends:

1) that the current policy, to provide Near Urban parks for populations of 60,000 or more, only, be continued;
2) that the minimum size for Near Urban Parks be at least 500 acres, and preferably, parks should be considerably larger;

3) that Ministry Policy should make it clear that Near Urban Parks are not intended to provide intensive recreational and amusement activities, and that Near Urban Parks are not be construed in any way as a substitute for Municipal park space;
4) that any future Strategic Land Use Planning documents make the purpose of Near Urban Parks explicitly clear;
5) that the design and priority of establishment for Near Urban Parks be viewed in the context of a total parks system, as discussed in sections 12.1 and 12.8.

12.3 Natural Environment Parks

Proxy Policy for Natural Environment Parks is reasonably well defined in the Approach to Policy document.

Unfortunately, the author of the ensuing discussion section perceived only the recreational aspect, and almost completely ignored the most important - biological - function which natural environment parks fulfill.

The implicit suggestion on the discussion - intended or not - is that the Ministry re-examine its policy with an eye to reducing the number of natural environment parks perhaps even below the minimum of one per site region. Such an implicit suggestion is insidious, for the reader is not aware that his responses are being manipulated, and he is not made aware that the protection and management afforded Crown Lands is wholly inferior to that afforded provincial parks.

This organization strongly supports the Ministry's proposal to expand the number of Natural Environment Parks. Indeed, we would very much support an expansion in the proposed park space allocation. As already noted, we view the biological functions of provincial parks to be of paramount importance. We therefore consider Natural Environment, Wilderness, and Nature Reserve areas to be top priority items in park establishment.

The Federation therefore urges:

1) that the Ministry adopt proxy policy; specifically, that it provide at least one major Natural Environment Park per site region;
2) that the Ministry not consider Crown Lands as providing a substitute in any way, for the creation of Natural Environment Parks;
3) that Natural Environment Parks be viewed and established within the context of the total park system and within the context of park priorities as outlined in section 12.1 and 12.8

12.4 Wilderness Parks

12.4.1 General

The discussion of Wilderness Parks in the Approach to Policy document provides no indication of proxy policy, and in fact provides no real information about the purpose or function of wilderness parks. The Federation is deeply disturbed both by the insidious reader-manipulation, built into the text questions, and by the diatribe on Wilderness Parks which is embodied in the questions themselves.

Strangely, it is the SLUP document itself which emphasizes that, because the north is the only existing reservoir of potential areas, wilderness requires full study and understanding by northern residents themselves. The discussion then proceeds to totally ignore the values, purposes, needs, and extent of the Wilderness' in Ontario proposal. Indeed, interested readers are not even directed to the proposal's source.

Add to this information void, a lack of biological training and some manipulation through question wording, and it is hardly surprising that many readers will likely respond that wilderness parks are not needed, or too large, or should all be located at Hudson's Bay.

It is not our intention to repeat the 75 page Wilderness in Ontario submission here, but we do wish to emphasize that this organization:

a) has spent the necessary time to evaluate the needs, purposes, merits, and necessary location of wilderness in Ontario;
b) completely supports the Wilderness in Ontario proposal, which would set aside a very modest figure of less than 6% of Ontario (of which 50% is wilderness now);
c) represents 12,000 Ontarians who do care what happens to the quality of environment, to the quality of life, and to the quality of Ontario's Parks.

12.4.2 Questions Raised by Text

To answer the questions raised in the Approach to policy text:

A) Is wilderness really needed, and if so, why? Yes, absolutely. Wilderness has immense biological, cultural social, recreational, and scientific value. These are detailed concisely, though briefly, on pages I - 6 to I - 10 of the Wilderness In Ontario proposal (appendix 1). In the future of intensive exploitation, these areas offer the few extensive ecosystems which will continue to operate naturally, with their natural interactions, diversity and evolutionary processes. Ontarians presently perceive the North as wilderness, a perception which makes us different from virtually every other developed country, and perception which is fundamentally important to most Ontarians. To reserve a mere 6% of our land in perpetuity for those functions - when the current figure is 50% - is very reasonable, and very modest indeed.

A second aspect, which must be emphasized, is that wilderness designation is needed now. Anyone familiar with resource allocation and with subsequent attempts to retrieve the land, knows that this is almost impossible. Once areas are allocated for resource extraction, they are seen as investments and jealously guarded by those interests which would exploit the areas. The interests see and treat the areas - not unjustifiably - as though they had a fundamental and inalienable right to exploitation. Where they are even prepared to give up the areas - which they are often-times not - the interests seek full compensation, either financially or in provision of alternative areas.

Once intensive exploitation has begun - particularly by the forest-industries - tremendous modification of the landscape and (functionally) irreversible changes to the ecosystem result.

In short, if wilderness areas are to be designated at any time, they must be designated NOW. The option to do so simply will not exist in the future.

B) Is the size range recommended acceptable? Without considerable biological training, without extensive familiarity with natural ecosystems and interacting processes, and without careful thought to the requirements for each of the functions which wilderness areas fulfill, one cannot possible address such a question properly.

Pages 1 - 13 to 1 - 17 and pages 9 to 12 of the Wilderness In Ontario Proposal (Appendix I) represent careful consideration by two experts who took the time to examine the question. To summarize their consideration, "some will accuse us of 'thinking big', we aren't sure that we aren't "thinking small".

That view has been further substantiated by recent work by Sullivan and Shaffer (1975). These authors carefully reviewed special requirements both for high trophic level carnivores and for the continued operation of wilderness areas as perpetual diversity pumps. It is not our intention to repeat their findings here; the reader should definitely consult the original work. But we do wish to emphasize their finding that "assuming that all ecosystems have species analogous to the grizzly, wolf, or mountain lion, then the minimum reserve should consist of 600 - 700 km". Moreover the authors point out that within any reserve, there is and must be a pattern or mosaic of deviations from the dominant flora and fauna, and condition. They conclude that a "goal for wildland reservation should be to obtain a sizable enough sample to include a normal or average successional mosaic".

These findings are totally out of keeping with the 100,000 acre figure proposed by the Parks Division. Either the Parks Division should substantiate its figure with scientific evidence, or it should adopt the larger size, for which there is considerable scientific rationale.

C) Is the use of the site region as the basis of natural selection justifiable?

We assume that by "natural selection", that the author intends simply "selection". The normal interpretation of "natural selection" has no meaning in this context.

The use of site regions as a basis for the selection of areas is of paramount importance, as anyone who has seriously studied the biological function of wilderness areas must realize.

If one were designating areas purely for their recreational function, then the constraints of location would not be nearly so stringent. But the most important purpose of Wilderness areas is the biological function: the preservation of representive natural ecosystems. Since the site regions are the different natural ecosystems then they must be used as the basis for selection of wilderness areas.

If one were designating areas purely for their recreational function, then the constraints or location would not be nearly so stringent. But the most important purpose of Wilderness areas is the biological function: the preservation of representive natural ecosystems. Since the site regions are the different natural ecosystems, then they must be used as the basis for selection of wilderness areas.

Clearly, the implicit suggestion that wilderness areas could be designated without regard to the site regions, or all in a few site regions, is neither justifiable nor desirable.

D) Can a linear corridor be used to replace a block area designation?

Discussing principles alone, this is a difficult question to answer. It is especially so without knowing the motives of the question's author.

In some situations, there would be considerable merit in having an elongated wilderness area. This would be particularly the case where one wished to incorporate a climatic tension zone likely to shift, with climatic changes, over a period of decades or centuries. Similarly, elongate form would be desirable to incorporate a self regulating watershed ecosystem. In the latter situation, it would obviously be ideally desirable to design the wilderness area to conform with the watershed itself.

However, in many other situations, a linear corridor could not possibly be adequate to fulfill the functions of a wilderness area.

The basis for design must be (as nearly as possible) the designation of a complete and a self-regulating ecosystem. In most cases, this will preclude the use of a linear corridor.

E) What are the best potential areas?

Areas should be designated on the basis of a comprehensive and a thorough examination of each of the site regions. As such, we cannot provide either an

honest or a simple answer to the question. And we seriously question whether any member of the general public is in the position to do so.

We do have some ideas, prepared simply in the form of outline sketches, during background work for the Wilderness In Ontario proposal. This material takes the form of brief checklist forms examining impediments; it does not attempt to detail or document biological values. The 26 sheets are at present in simple data form, but we hope to draw them into a form suitable for presentation to the Parks Division, in the future. Other data exists within a myriad past MNR studies, within work by Maycock and by Addison, and within Parks Canada planning studies.

We feel strongly that decisions on preferred wilderness areas should be the result of intensive examination, and not based upon the suggestions or feelings of an individual familiar with only a portion of a site region.

In short, the Division of Parks should prepare an analysis of each site region, examining the region as a whole, and analyzing alternative and recommended sites. Such an analysis should be in document form and should form the basis of park selection.

We fully realize that such analysis would cost a substantial sum, but there seems to be a general consensus that the costs of preserving representative areas should be considered as one of the costs of exploiting the site region.

F) <u>Based upon some satisfactory measurement criteria, what would the effect of establishing such areas have on other resource uses?</u>

The intent of "satisfactory measurement criteria" is not clear to us, but we presume that it is a reference to wilderness area size, already discussed in question 2.

The effect on other resource uses cannot, of course, be magically stated or even simply determined. The effect will depend considerably on both the site region involved, and upon the requirements to protect the individual ecosystem under consideration.

Certainly, there will be effects upon other resource uses. In some situations,designation would preclude the cutting of timber. In other situations, it <u>might</u> preclude the extraction of some mineral deposits. Certainly these will be real costs, and they should be a

factor in the decision on locations of wilderness areas.

But they should not be overiding considerations, to which all other factors become subservient. Availability of resources is very much a matter of balance between costs and alternatives, and very few materials are in such short supply that the unavailability of specific deposits in areas represents a threat to society's well being.

Clearly, the costs of foregoing resource exploitation must factor in the selection of wilderness areas, but it should not be the determinant which dictates the presence, absence, or location of wilderness parks.

G) Can the location of these areas in this region adequately serve the needs of all Ontario residents?

Again, the motivation and intent of the question's author are not made clear; does the author mean that wilderness parks should be located elsewhere, nearer the centres of population? Is he suggesting that the designation of wilderness parks in this region might preclude the need for wilderness parks in other regions? Or is he alluding to the valuable contribution which wilderness parks in this region will play for all Ontarians - including those who are never able to visit the region?

Wilderness Parks in the region are certainly required to fill the needs of all Ontarians, just as national parks on the west coast are needed to fill the needs of Canadians on the east coast. For, among other purposes, wilderness areas are set aside in the interest of the full population: to protect, in perpetuity, constant living representatives of Ontario's natural ecosystems. Unless the system is complete - which is impossible without the representation of each site region - then all Ontarians lose.

Similarly, the retention of substantial wilderness areas in the northwestern region is important to all Ontarians. The people of this province treasure the perception of the North as wilderness. People may never see it, but they feel better because it is there in the same way that non-participating voters feel secure knowing that their freedom to vote remains (MacMillan et al, 1975). Perceptually, wilderness has for many become a retreat, a sanctuary and a place of order. As the north is steadily opened to exploitation, to roads, and to building - as the SLUP documents themselves forecast - wilderness areas must assume a prime role in maintaining that valued perception.

The creation of wilderness parks in this region does not mean that parks need not be designated in other regions. One need only consider the two afore-discussed notes to realize that wilderness areas must be designated in as many site regions as is physically possible.

12.4.3 Recommendations

For all of these reasons, the Federation urges:

1) that Ministry Policy be to locate one wilderness park in each site region;
2) that Ministry Policy adopt the size ranges of the Wilderness in Ontario proposal;
3) that, in the selection of park locations, the Division of Parks prepare an analysis for each remaining site region, examining the region as a whole, and analysing alternative and recommended sites. Such an analysis should be in document form and should serve as the basis for park site selection.
4) that the effect of designation on other resource uses be considered in park site selection, but not allowed to become the overiding factor;
5) that park areas be delineated in terms of biological attributes and requirements, not by simple block designation;
6) that Ministry Policy recognize the protection of wilderness areas as one of the costs of opening the region to further and more intensive exploitation, just as the designation of municipal parks is considered a cost of permitting further urban development.

12.5 Nature Reserves

Proxy Policy is to establish at least one major nature reserve representing each of the 13 site regions, and to designate such additional smaller areas as are required to include components absent from the larger areas. Such areas are to be used primarily for their biological function only, but scientific study and some interpretive and educational programmes are also considered compatible.

On first examination, this policy might seem sound. At least, the principle objective seems eminently desirable. But as one begins to explore the practicalities of designation and management, and the implications of special constraints, one is quickly forced to the realization that nature reserves - as they are presently viewed in the Ministry - can accomplish very little indeed.

We have already spent considerable space exploring the biological purposes which we view as the most important function of Wilderness areas, and indeed of the provincial parks system itself. We have already drawn attention to the calculations and research by Addison and Bates (1975) and of Sullivan and Shaffer (1975). It is clear from their work that long-term protection of species, of natural evolutionary processes, and of total diversity, requires very large reserve areas.

We seriously question the usefulness of Nature Reserves as long term protectors of ecosystems when they are conceived as being such small and essentially static units.

For purposes of protecting ecosystems, we consider it imperative that major areas and (relatively) self-regulating ecosystems be set aside. For these purposes, we consider Wilderness areas and large natural environment parks as being useful.

We consider Nature Reserves - as they are presently perceived by the Ministry - as being useful in three ways only:

1) To further control use of very sensitive habitat already located in provincial parks. At present, some areas of provincial parks contain extremely significant and extremely sensitive species or systems components which are not sufficiently protected from intensive use by park visitors. If the Division of Parks feels that such a designation would facilitate greater control and protection than could be achieved through natural zone designation, then we support nature reserve designation.

2) To protect unique habitat either of systems or of species, which cannot possibly be incorporated into the Wilderness area designated for the site region. It might for example, prove totally impossible to establish a wilderness area so as to include the Lake-of-the-woods habitat of the White pelican. In such a situation we feel that this habitat - including not only the Three Sisters Islands, but also feeding areas - should be designated as a nature reserve. Reserves like this are considered by the Federation, to be essential to the perpetuation of some rare and endangered species. Some have suggested that the protection so offered will be ephemeral. In some cases, that view is undoubtedly correct. Some species will disappear despite the creation of a reserve. Even so, the reserve may perpetuate the species. Heronries, for example, are transitory. But by protecting the colony from visitor harassment and physical damage, one can keep the colony intact even if it moves. And, in some situations, species can be perpetuated even within a developed land-use mosaic.

3) To designate and protect areas too small to be managed as typical park lands, or located in areas where natural ecosystems are so-restricted that park designation is impossible. The Pelee Island habitats are extremely small areas. Yet they do provide suitable habitat for blue racer, bald eagle, island water snake and Blanchard's cricket frog. There is every reason to believe that these species can be retained within the mosaic of land-uses on Pelee Island, provided the essential habitat components are protected from physical damage or intensive use.

We believe that particular attention and priority should be paid to the designation of Nature Reserves in the habitat of rare, threatened, and endangered species. The protection of habitat must be considered the first imperative for all species, and we believe that policy should be to include as many of the currently threatened species in reserves as possible - even if this requires a number of reserves within a single site region, and even if it requires several reserves for a single species.

The Federation therefore urges:

1) that the Ministry view Wilderness areas as the most important form of "Nature Reserve" for the perpetuation of natural ecosystems and their natural ecological, evolutionary, and successional processes;

2) that Ministry Policy be to create nature reserves:
   a) to further control use of sensitive habitat already located in provincial parks,
   b) to protect unique habitat either of systems or species, which cannot possibly be incorporated into wilderness areas,
   c) to designate and protect areas too small to be managed as typical park lands, or located in areas where natural ecosystems are so restricted that park designation is impossible;

3) that Ministry Policy be to focus particular attention and priority upon the creation of reserves to protect rare, threatened, and endangered species, even if this requires several reserves in one region, or several reserves for one species.

12.6 Historical Parks and Reserves

Proxy Policy is"to provide opportunities (scientific, educational, and recreational) for exploring and appreciating the basic themes representing human development in this Province, in the sites which best represent those themes". In addition, policy calls for the identification and preservation of historically significant corridors.

This Organization's constitutional objectives and general aims do not deal specifically with historical areas. However, as individual citizens, many of us are deeply interested in the interplay between the natural environment and our historical development. Hence, we support proxy policy.

The Federation therefore recommends:

1) support be given to proxy policy for historical parks and reserves.

12.7 Trails

Proxy Policy is to provide corridors "for all forms of linear recreation" in order to connect urban areas with a wide variety of Ontario's natural and cultural landscapes. The discussion specifically mentions the provision for hiking, cycling, horseback riding, snowmobiling, cross country skiing, and interpretation.

The basic concept is strongly supported by the Federation. The ability of many residents and tourists alike to get "into" natural areas, and away from direct competition with roadway or intensive recreation, has been seriously limited by the lack of trails and by the lack of designated, known trails. The clearly stated policy proposal is therefore welcomed.

One seemingly trivial area which requires comment is the reference to all forms of linear recreation. Although they are not mentioned in the ensuing list, hovercraft and all-terrain summer vehicles both could be classed as a type of linear recreation. Both of these modes of transport are highly consumptive and the former can, in particular, be extremely damaging to natural and biological values. (Singleton, 1973) For this reason, we feel strongly that the Ministry should not put itself into the business of building trails for these machines. To ensure this, the wording of policy should include the specific types of linear recreation, rather than the blanket statement.

The Federation therefore recommends:

1) that proxy policy for trails, with one minor alteration, be adopted as Ministry Policy;
2) that Policy list the linear recreation forms - hiking bycycling, horseback riding, snowmobiling, cross-country skiing, and interpretation - rather than including a blanket statement about "all forms of linear recreation".

12.8 Parks Priorities

Since funding and sheer time limitations always pose constraints, the question of priorities is ever-present, and has major implications for the type of programmes which will be launched in the future.

Nowhere is this more significant than in the designation and creation of parks. Two types of priorities are involved: a) which types of parks should take priority, and b) should acquisition - expansion of parks-or should development take priority.

This organization feels strongly that the highest priority should be given to the acquisition of Nature Reserve, Natural Environment, and Wilderness Area Parks, followed by Near-Urban and Historical Parks, and followed last by trails and recreation parks.

We feel that the most urgent single requirement facing the Ministry today is the setting aside and designation of representative lands with high biological qualities for their own permanent protection and for the appreciation of generations to come. Development can be undertaken at any time if one has the land available. But the longer one leaves acquisition and designation, the more hopeless the task becomes: Fewer lands are available, the quality of available areas deteriorates, eventually-acquired areas become steadily more disturbed, and the costs and problems of establishing the parks escalate geometrically.

We consider it imperative that the highest quality and most extensive possible representatives of our natural environment be set aside. The longer the task is left, the less attainable the objective becomes. And nowhere is this more important than

with nature reserves, natural environment parks, and wilderness areas. We feel strongly that these areas must receive priority.

We also feel that acquisition should take precedence over development, since development can take place at any future date, with only a (comparatively) small increase in cost.

This differs markedly from the biases of the author of SLUP's parks section, who seems to feel that parks are only to provide recreation and should focus heavily on the provision of intensive recreational persuits. That author's biases are very strong, yet subtly conveyed, and will no doubt have a strong impact on the type of feed-back which the document receives. We would suggest that the reader manipulation be borne strongly in mind when such feedback is evaluated.

The Federation would finally urge that careful attention be given to satisfying those objectives whose "last chance" is now before us: nature reserves, natural environment parks, and wilderness areas.

The Federation therefore urges:

1) that priority be given to acquisition and designation of park lands, during the first decade at least, over the development of parks;
2) that priority should be assigned, in order, to:

    a) the single time task of developing a complete park system plan,
    b) the establishment of Wilderness Areas, Nature Reserves, and Natural Environment Parks, with particular emphasis upon wilderness areas and those nature reserves protecting endangered species,
    c) The Near-urban and Historical Parks establishment,
    d) Trail and Recreation Park creation.

Furthermore, we recommend that sections (a) and (b) above be assigned much higher precedence that (c) and (d);

3) that no priority whatever be given to the provision of intensive sports and amusement areas and facilities within towns, since these should remain a Municipal responsibility;
4) that the particular biases and reader manipulation within the SLUP report's parks section be considered carefully when evaluating feedback to the public documents.

13.0 "General Recreation Areas"

Proxy Policy is to designate a variety of Crown Land areas for recreational use, especially at low and medium intensities.

Such a proposal appears entirely supportable at first examination. However, under more careful scrutiny, this policy emerges as an intriguing method of avoiding park designation, and hence of permitting continued mining and logging of areas which should be parks.

The foregoing conclusions are strongly reinforced by statements contained in the SLUP discussion: "Since parks preclude mining, it would be impossible to establish recreation areas in certain parts of the region,where parks are the only means of doing so". And, this "has the advantage of permitting other uses such as forestry and mining". The intention of the proponents is eminently clear.

Moreover, it is important that we realize the implications of such a classification for "unlikely situations". Given a politically uncomfortable situation when the Minister has to decide between parks and other land-uses, the present situation forces a true decision. Either the biological features will be protected in perpetuity, or they will be sacrificed, in perpetuity, for short-term economic gain. If the Minister were able to classify land as a "general recreation area" he would almost invariably do so - creating the illusion that he was creating a park, but in actual fact sacrificing the biological qualities of the area, forever. Clearly, the proposed policy will mitigate against the establishment of parks and against the protection of biologically significant areas.

Other problems are of course, obvious. Lands designated under these criteria could be afforded none of the protection given

parks. The areas could not be controlled, since they are outside Parks management and park regulations. Services could not be provided. Litter would not be collected. Wear and damage situations would not receive attention or remedial action. And of course, none of the works and services made possible by entrance fees could be provided, since a fee could not be collected.

Crown Lands are already open to the public, so the proposed designation has no real benefit in this context. The only "benefits" at all are that logging and mining would continue to deface areas which should become parks.

Given these brief considerations, this small seemingly-innocuous proposal takes on alarming dimensions with frightening consequences.

The Federation therefore urges:

1) that Crown Lands should continue to be open to public use; <u>but</u>
2) Proxy Policy of designating primary recreation use areas should not be adopted, since it amounts to a circumvention of park designation.

14.0 Cottaging

Proposed Policy is "to maintain the present relative position of cottaging as a major form of recreation. A variety of leased cottage lots will be made available, ranging from fully serviced clusters to unserviced disposal location. Cottaging opportunities will only be made available when there is no conflict with public recreation and leases will be the only means of lot disposal".

This proxy policy, with certain additional clarification and constraints, seems reasonable.

The first of our concerns is the basic orientation of proposed policy. We see no reason why the Ministry should place itself in the position of trying to maintain the high relative position of cottaging. The lakes on which cottaging occurs are almost invariably the lakes on which public recreation (such as boating, canoeing, swimming, and fishing) also occur. The Ministry policy would more appropriately, we believe, be "to permit the present relative position to continue", rather than "to maintain the present position".

Secondly, we feel policy should include a stipulation on the provision of cottaging: "To permit the present relative position of cottaging to continue, provided it does not interfere with public recreation and provided all cottages will be installed and operated without substantive deterioration of the natural environment".

We believe that these provisos are particularly important in the areas of intense development - especially within ready travelling distance of the centres designated as primate and strategic A.

A number of comments about the intensity and conditions under which cottages should be allowed are contained in section 2, and will not be repeated here.

Finally, we feel that additional clarification is required with respect to "conflict with public recreation". Public recreation, we believe, should include not only beach use, but also canoeing, and boat-oriented outings which utilize shorelines for various purposes. Experience with waterways in southern areas has shown a progressive accumulation of cottages, to the point where the lake loses all its perceptual qualities for the boater, to the point where it is impossible to go ashore for a picnic or hike, and to the point where wildlife viewing opportunities no longer exist.

For these reasons, we feel it important that Ministry policy declare, at the outset, that cottage development will not be allowed to substantively impair these recreational aspects, and that at no time will development of more than 50% of the lake shoreline be permitted.

The Federation therefore urges:

1) that Ministry policy be to permit the present relative position of cottaging as a recreational form to continue, provided it does not interfere with public recreation, and provided all cottages will be installed and operated without substantive deterioration of the natural environment;
2) that Ministry Policy clarify "public recreation" to include all waterbased public activities, like canoeing, boating, and fishing;
3) that Ministry Policy be to prevent the development, at the utmost maximum, of more than 50% of a lake's shoreline;
4) that Ministry Policy adopt the recommendations set out in section 2.

15.0 Energy

As is rightly pointed out in the Approach to Policy document, energy production is primarily the jurisdictional responsibility of Ontario Hydro.

However, since both energy production and energy transmission have pronounced effects upon the natural environment, it does not seem at all unreasonable for MNR to adopt policy with respect thereto.

The first, and most important concern is the proliferation of generation stations, particularly those along the Lake Superior shoreline. Much has been said about the hazards of nuclear plants and heavy water plants. Much has been said about the thermal plume of thermal stations. Much has been said about the affects of atmospheric sulphur emissions. And to their credit, Hydro's design personnel are attempting to ameliorate many of the effects.

We fully realize that Ontario Hydro planners are caught in a dilema, that there is no closed system to be had for a few dollars more. We fully realize that many alternatives - like cooling towers to reduce calefaction - are extremely expensive and not without other environmental impacts. And we fully realize that limitations upon consumption are neither simple, nor adequate to meet genuine needs, especially given the stupendous increases in population and industry dictated by other Government policies.

None-the-less, we urge that the Ministry take a hardline position with respect to the placement and design of generation plants. Ministry Policy should require that all plants be designed to eliminate all possible impacts upon the natural environment, and to operate within the natural characteristics

of the watershed upon which they are built. The Ministry should insist absolutely upon closed systems for all wash and processing waters passing through nuclear plants. The Ministry should insist upon total containment systems for all liquid wastes, in order that no water borne emissions can find their way into ambient watersheds.

And most important, Ministry Policy should call for a total halt to the location of generating plants along the shore of Lake Superior. It is simple to say that the calefaction and emissions from these plants have few observed effects. But such an assertion ignores totally the unknowns - the effects upon rare species; the effects upon endangered fishes which are disappearing from the lakes, the effects upon lake Superior as a centre of evolution, the effects of seemingly trivial or unrecognized emissions from the plants, the effects upon Lake Superior as a Megazoo.

Sullivan and Shaffer (1975) have drawn together a great deal of biogeographical work, and suggest a concept which is entirely applicable to Lake Superior. Their concept suggests that the integrity of the whole system is of crucial importance to its long-term biological importance, and that disturbances - even without directly visible effects - result in severe impairment. Lake Superior is widely acknowledged as a very complex and very sensitive cold-water ecosystem. It has been suggested that the lake plays an important role in gastropod and perhaps also fish evolution. It certainly supports species which are seriously endangered and some which may become extinct - on a global scale. In short, it is a vital ecosystem for which all possible attempts should be made at protection.

One of the first and most directly important steps to protecting Lake Superior is to stop proliferation of the facilities loading the lake with wastes - including thermal wastes.

The second significant concern, which overlaps with Ministry Policy, is that of energy transmission. Although the concern in northern Ontario has not yet reached the proportions of southern regions, the impacts are very similar, and concern will certainly rise quickly with the proliferation of consumers and facilities. We believe that specific Ministry Policy is required, calling for:

1) the minimum possible number of transmission corridors, and combinations of lines within a single corridor wherever it is practicable;

2) exclusion of all future construction from parks and park reserves as well as total avoidence of habitat areas of presently rare, threatened, and endangered species;

3) the location of corridors, wherever possible:

   a) in areas which are exploited or to be exploited by extractive industries anyway,
   b) together with, or in close proximity to, the linear utilities like railways, roads, and pipelines,
   c) away from areas of high scenic impact - notably spectacular river crossings and areas of considerable topographic relief.

The expression of such positions, at the outset and as clear policy, will have far greater impact than similar expressions after planning on individual lines has already begun.

The Federation therefore urges:

1) that Ministry Policy require of electrical generation facilities:

   a) that all plants be designed to eliminate all impacts on the natural environment possible,
   b) that all plants be designed and operated within the natural constraints of the system (e.g. no diversions),
   c) that all cooling, wash, and other processing waters be designed within closed systems, even if this requires "internalizing" an isolated inland lake,

d) that all plants have total containment systems, capable of trapping all wastes or spills in all contingencies;

2) that Ministry Policy preclude the construction of all new thermal generating plants on the Lake Superior shoreline;

3) that the Ministry adopt policy with respect to high-tension transmission facilities, specifically urging:

a) the minimum possible number of corridors, the combination of lines wherever practicable, and the upgrading of existing lines in preference to the construction of entirely new corridors,
b) the location of corridors together with, or in close proximity to, other linear utilities like roads, railways, and pipelines,
c) exclusion of all future construction from Parks and Park Reserves as well as total avoidence of habitat areas of presently rare, threatened and endangered species.

16.0 Water

Although water has been raised directly or indirectly in many of the policy discussions, there are two particular concerns which have not been dealt with by Ministry policy: Diversions and Fluctuations. Since both of these were raised in the Problems and Issues section of the SLUP document, we consider it imperative that both be treated by MNR policy.

16.1 Water Diversions

For the last decade, at least, there has been a real concern, particularly within the region, about the possible diversion of northern waters, for hydro electric generation purposes and for direct export to the USA. Both of these concerns have continued, and indeed been aggravated by the Quebec James Bay Project by the Churchill River Proposal, and by continuing discussion in the USA.

The Federation is directly and absolutely opposed to any diversion of water for export purposes. We urge strongly that the Ministry of Natural Resources adopt a similar position. Ontarians value highly the perceived state of the north as a wilderness area, with pristine rivers and abundant healthy wildlife. Diversions for export would not only destroy this perception; it would also result in unavoidable damage to watersheds and their wildlife-delicate systems which have developed over thousands of years.

Similarly, we urge that the Ministry view very critically every proposal for further alteration of northern rivers for hydro-elctric purposes. At present, few unspoiled wild rivers of major consequence remain, even in northern Ontario. The comparatively few sites which Ontario Hydro has indicated as being capable of supporting generation facilities (a) are located

on wild rivers of recreational and wildlife significance (b) are located at, or would require substantial impairment of, the rivers' scenic locations, (c) are remote from power consumers, and (d) are not of major generation significance in any case, especially given the large transmission losses.

The Federation therefore urges:

1) that Ministry Policy oppose any proposed diversion of water for export from Canada;

2) That Ministry Policy be to protect all rivers within the region from hydro-electric generation. We urge that the Ministry totally block such proposals unless the development is of crucial importance to society, and unless there is no alternative source of power generation.

16.2 Fluctuations

Water level fluctuations, resulting from both natural and human causes, have caused damage and considerable concern in the region over the last decade.

16.2.1 Natural Fluctuations

Since time immemorial, natural occurrences like floods and seiches have caused considerable inundation and even alteration of ecosystems. To natural systems,these inundations are very rarely of major or long-lasting significance. Even where "damage" appears to result, such changes are usually part of a plagiosere, essential to the perpetuation of habitat variety.

The damage which results from floods, seiches, spring melt, and short-term inundations is therefore almost entirely confined to human developments. And the fault for that damage should not be placed with nature, but rather with the human short-sightedness or carelessness which undertook damageable development on flood-prone lands.

Although one may well have sympathy for those who incur the damage,the consequence of such development is forseeable.

Rather than endeavouring to protect unwise development - or what is worse, to degrade rivers to permit such development - we believe that the focus of Ministry Policy should be to prevent the location of development on flood-prone lands, in the first place.

The Federation therefore recommends:

1) that the Ministry adopt a policy of opposing and indeed of prohibiting the development of any lands subject to flooding by the regional design storm;

2) that the Ministry adopt a policy of refusing to make any alterations to waterways for the purpose of protecting new developments on flood prone lands or to permit new developments on flood prone lands;

3) that the Ministry permit alteration of waterways to protect long-established structures only as a last resort, where the removal of buildings from flood prone lands, of relocating occupants, is economically impossible, where other forms of protection are either impossible or more damaging, and where the value for damage likely to be incurred is far greater than the cost of undertaking channel modification;

4) that the Ministry adopt a policy of paying no assistance or compensation to anyone arising out of damage by flooding on land susceptible to flooding by the regional design storm.

10.2.2 Man-Induced Fluctuations

Unlike natural fluctuations, man-induced water level changes often result in severe damage both to human developments and to the natural environment.

Fluctuations sufficient to cause significant damage originate primarily with 2 activities: damming and channel modifications. The effects of damming tend to be obvious, although secondary effects and unanticipated effects (e.g. dam failure) pose greater threats than are generally realized. The effects of channel modifications, on the other hand, may not be obvious at all.

As general policy, we feel that the Ministry should prevent such human modifications as can reasonably be expected to substantively increase flow fluctuation and hence cause damage, either to human developments or to the natural environment. This should apply not only to actions which are significant by themselves, but also to actions which are cumulatively significant.

This means first and foremost, that the Ministry must extend increased control over alteration of waterways and their valleys. These powers already exist, in the form of The Lakes and Rivers Improvement Act and the Conservation Authorities Act. But they simply are not being utilized as they can and should be. Specifically, the Ministry should act to prevent all filling and all building in valleylands, as well as all modifications to valleys and to river and stream channels.

Secondly, the Ministry should develop firm guidelines on the flow fluctuations which are to be permitted upstream and downstream from existing peaking dams. The criteria should apply both to hydro-electric facilities, and to dams used to "flush" effluents down rivers, like the Wabigoon. The criteria should, in our view be sufficiently restrictive to prevent environmental and human damage, and to prevent interference with recreational persuits.

Finally the Ministry should vigorously oppose the raising of any lake where this would result in a net loss of wetland habitat, or in significant impairment to existing natural values.

In summary the Federation urges:

1) that general Ministry Policy be to prevent all human modifications to watercourses and valleys which can reasonably be expected to increase flow fluctuations and hence cause damage, either to human developments or to the natural environment. This should apply to all actions which are significant individually or cumulatively;

2) that the Ministry enforce the Lakes and Rivers Improvement Act and better utilize the Conservation Authorities Act to prevent all filling and all [illegible] in valleylands as well as modifications to valleys and stream channels;

3) that the Ministry develop and enforce firm guidelines on the flow fluctuations both upstream and downstream from 'peaking dams' including both hydro-electric related facilites and dams uses to "flush" effluents;

4) that the Ministry Policy be to oppose and prevent any proposal to raise lake levels which would result in significant impairment of existing natural values.

17.0 Methadology for further SLUP exercises.

In reviewing the current SLUP documents, a number of concerns have arisen. Since these may have considerable implications for Ministry Policy or for the effectiveness of future SLUP exercises, we wish to make several comments.

17.1 Public Review Period

First, the period for review and comment must be considerably extended if the Ministry wishes to receive reasoned response, rather than simple emotional reaction. Needless to say, this organization wishes to solicit input from a substantial number of its members; to formulate and to reach a consensus on a response. This simply cannot be done in the short review period originally provided by the Ministry.

17.2 Terminology

A second aspect of serious concern is the terminology employed in the development of policy. This may seem inconsequential, but the severe restrictions imposed by two definitions in the SLUP text lend a tremendous bias to discussions. Indeed, they mean that policy must exclude some of the most important areas of Ministry concern.

"Objectives are quantifiable ends that are chosen to be met and normally should be stated in terms of human impact such as jobs or person days of recreation or dollars earned" (emphasis ours). This statement is not at all accurate, as evidenced by the first objective which follows it: To administer and protect, and conserve public lands and waters ..." Needless to say, this is not at all quantifiable.

But what concerns us most about the statement, is the heavy recreational bias which the statement seems to reflect. It seems to suggest that the Ministry should not concern itself with the

protection of wildlife for its own sake, or that the Ministry should not be concerned with such factors as human perception. Rather, it seems to suggest the Ministry should concern itself only with providing many days of employment or of recreation.

One might well consider as an example, wildlife. We feel adamantly that Ministry Policy should be to protect the diversity and to maintain the abundance of all forms of wildlife. Yet, if objectives can only be stated as "quantifiable ends" and in terms of human impact such as person days of recreation, it seems likely that Ministry policy will be formulated in terms of ducks shot or trees cut, rather than in terms of wildlife protected.

Another particularly strong example of this is contained in the same definition section: "a Parks policy stated in terms of acres of park rather than person days of recommendation is a means policy". This suggest that parks exist solely to provide x-number of person-days of recreation, and that the protection of acres of natural ecosystem cannot be an end in itself. To the contrary, the protection of substantial segments of the natural environment, for its own sake and for future generations, is perhaps <u>the</u> most important objective for provincial parks. Acres of protected land can indeed be an objective in itself, and not simply a means to be measured and weighted in terms of jobs created or hours of recreation provided.

The Federation therefore strongly urges:

1) that the Ministry redefine "objectives" for future planning exercises, so that the (a) need not be quantifiable, and (b) need not be tied to human jobs, dollars earned, or man days of time spent. It is imperative that objectives be definable in terms of any desired end.

APPENDIX I

Exerpts From

WILDERNESS IN ONTARIO

Addison and Bates
1974

SECTION B

WHY DO WE NEED WILDERNESS?

Stating why we need wilderness is difficult. It isn't easily argued in the scientific language of gene pools; nor by the return on dollars invested; nor in the social statistics of jobs created, factories built, or slums rejuvenated. Rather it requires an understanding and appreciation of less tangible values.

For some of us wilderness is a special type of hospital where we go to be cured of the ills created by the complex social pressures of today. For some, it is the one place which inspires the production of lasting works of literature, art, music or photography. For some it is the only place left in our daily lives where we can meet nature on her terms, with all of her perverseness, benevolence, calm, tempest and joy. For some of us it is where we may find a scientific clue leading to a new medicine or to an understanding of an ecological process. And to some of us attempting to develop national identity, wilderness colours and conditions the history so essential to that identity. Wilderness, then, has social, cultural, recreational, scientific and historical values for all of us. Extensive and widely known wilderness writings deal at length with these values, but they are worth reviewing here.

CULTURAL VALUE

Wildlands have been, and remain, central themes of our culture. Tom Thompson, the Group of Seven, Frances Ann Hopkins, Kane, and Krieghoff produced works of art that we treasure. The prose and poetry of Gabrielle Roy, Douglas LePan, Blair Fraser, A. R. M. Lower, Margaret Atwood, Sheila Burnford, Wayland Drew, Farley Mowat, and many others have brought to us varied images of our wildlands. By film and tape, people like Chris Chapman, William Mason, and Donald Gunn have focussed our eyes and ears on the sights and sounds of the great uncivilized world that is our heritage.

These and others have made wilderness an important part of our cultural heritage. If their work is so important to our culture, how much more important is to preserve some of what inspired, and inspires, them.

RECREATIONAL VALUE

The recreational value of wilderness is easiest to envisage. A host of indicators demonstrate the importance we give wilderness recreation. Conducted wilderness trips have proliferated and continue to do so. Sales of snowshoes, canoes, backpacks and other wilderness gear have created an economic boom, in which demands outstrip supply. Park visitor statistics rise inexorably, and our accessible wilderness is being "recreated" to death. Nature trails have to be used alternate years so that the things they exhibit can survive. The recreational demand for wilderness? — it's overwhelming.

SOCIAL VALUE

Facing nature without the protection of technological impediments helps develop individuals and their character. The Boy Scout movement has long been evidence of this. The Outward Bound movement has refined the idea. Today we find their ideas being widely applied in outdoor education programmes across Ontario.

For those of us having difficulty adapting to "Future Shock" now, the key lies not in exposing ourselves to more pressures. Rather, we need to escape those pressures by fleeing to wilderness and rejuvenating our minds and spirits for the next onslaught. For some of us, wilderness is the key to survival.

Perhaps the least understood, but potentially most important social value of wilderness is its role in the defence of individualism and the individual's freedom. Wayland Drew is a most able exponent of this idea. He says:

> The individual and wilderness share many characteristics. Both retain an autonomy which is disconcerting to the State . . . Free a man or a woman from the net of daily preoccupations, bring him into thoughtful contact with natural balances, and the chances are that he will begin to ask questions which society can only answer with a sickly smile. He might wonder, for example, why the water is not everywhere as pure as it is in Quetico. He might wonder at the primitive joy which inspired those pictographs which still glow from the rocks like miniature celebrations, and he might ask why it is that the urban graffiti are by contrast insults to the soul and spirit. He might begin to compare his enervating daily dosage of television to the

> random exuberance of sounds he finds in wilderness. Above all, he might begin to question why it is that he feels so good, and why why that feeling must last for only two weeks of the year. (3)

Those are questions which create problems in a smoothly running technological society. But, as long as wilderness stimulates the creation of such problems, individuals will exist, and "1984" will still be in the future.

HISTORICAL VALUE

In the broadest sense every bit of wilderness has historical value. The rocks record geological history and perhaps some biological history. Surficial features record glacial history. Bogs have historical columns in the form of peat layers containing pollen, which tell us what past forests of the area were like.

Some tracts of wilderness contain the artifacts, which when discovered, help tell the tale of man's diverse history in Ontario. In other tracts of wilderness, such as Quetico, we can experience the thrill of reliving history by following the routes described in early travellers' journals.

The wilderness has, in fact, been a strong presence for all those who lived in Ontario: the North American Indian, the explorer, the fur trader, the pioneer settler, the lumberman. Even today wilderness plays a significant role in Canadian recreation and culture. It is an integral, but threatened, component of our history.

Wilderness, in short, has high historical value, both as an index to, and a shaper of, history.

SCIENTIFIC VALUE

The health and survival of living things, including man, may well depend on large areas of land that are essentially not manipulated by man for his ends. Aldo Leopold said it this way:

> A science of land health needs, first of all, a base datum of normality, a picture of how healthy land maintains itself as an organism . . . The other and most perfect norm is wilderness.

> . . . Wilderness, then, assumes unexpected importance as a laboratory for the study of land health . . . Recreation is not their [wild areas] only, or even their principal, utility.(4)

Durward Allen sees

> the natural ecosystems that we have left as perhaps the most vulnerable and fragile of all our resources. They have many uses, many of which we don't even need to try at this time to foresee.(5)

For example, a basic aim of Ontario forestry practice is to upgrade the quality, quantity, and growth of trees by genetic selection utilizing the best trees growing in the wild. But forest harvesting practice also dictates that "superior" trees have the greatest value and are cut first. Therefore, we need tracts of wilderness to preserve those forest gene pools to help ensure the health of the forest industry.

Wild plants and animals provide chemicals for medical uses, are used in research, provide baseline data and reference points for research studies, and are useful and perhaps essential to our well-being. The great strengths of wilderness are its great variety of organisms and its natural cycles and processes. When man interferes with these, he distorts and weakens them.

John Milton summarized the values of ecological diversity:

> Perhaps the most appalling aspect of modern man's insensitive degradation of the environment has been the mounting destruction of earth's natural diversity and the creation of monotonous, uniform human habitats. Ecology has shown us that varied ecosystems are healthy, relatively stable environments better able to withstand stresses; seen in this context, the contemporary trend toward creating an artificial, bland, standardized biosphere is a fundamental threat to the quality of human existence, if not man's very survival. With each loss of variety, our potential for human choice, freedom, and change narrows.(6)

Thus, while wilderness reserves are not the only way of ensuring that this diversity is maintained, it is obvious that large wilderness reserves could be one of the best and surest ways. It seems quite irrational, though typically human, to destroy that which has provided us with so much, and which, if left intact, could provide so much more.

A FINAL NOTE

To summarize, there is a large and extensive literature documenting the varied values of wilderness and arguing for the establishment of wilderness areas. Unfortunately, while Canadian publications are growing in number, it is largely an American literature, using the American scene and situation as an example. The Canadian situation, similar in some ways, is significantly different in others. Setting aside wilderness is a political process. Obviously, many U.S. political-wilderness tactics do not apply here. In the U.S., little wilderness is publicly owned. In Canada, most is. For these and other reasons we need a larger Canadian wilderness literature documenting the values of Canada's own unique wilderness.

SECTION D
WHAT SIZE?

Most definitions have avoided the question of size. They have done this for good reason. For instance, the minimum area required to protect whooping cranes' breeding ground is quite different than that needed to ensure survival of a remnant population of red spruce. Similarly, a wilderness area near a large population centre will of necessity have to be smaller than one such as Polar Bear Provincial Park.

Despite these and similarly good reasons, we believe an area must have a certain minimum size to qualify as wilderness. The remnant red spruce population could be protected in a nature reserve, an ecological reserve, or an IBP (International Biological Programme) site. Similarly, a park site near Toronto, too small for wilderness designation, could be designated a "Natural Environment Park"[9] by the Ministry of Natural Resources. Areas within it approaching a wilderness condition may then be zoned to preserve their character as much as possible. The important thing here is that there is a variety of reserves, preserves, and parks each having different characteristics and thus having different functions. Some will have some characteristics in common, but each will have a sufficient number of unique features to distinguish it from another type of park, reserve, etc. Wilderness reserves are one part of this spectrum of designated land uses.

Wilderness has always been characterized by a number of features as noted in the definition. More than anything else, we associate it with large areas. Traditionally, and even today, Ontarians still think of that half of the province north of the CNR as wilderness. Note that we think of it as one block of wilderness—half the province!—not as a number of small discrete blocks of wilderness. Despite the fact that Cold Creek Bog or Tiny Marsh retain a few wilderness features, it is doubtful if many people would consider either one to be wilderness. So, large size is important to wilderness.

Most people expect wilderness to be a place where they and the environment can escape the effects of civilized man. In an age when chlorinated hydrocarbons, radio-active fallout, and other effects are found in every environment, this escape is relative. Relief is sought from noise, crowding, manipulated landscapes, and other obvious effects of man. Noise is one good

example. Today, on a calm day, industrial, highway and railroad noises are often heard 10 miles from their source. All of Ontario's large parks except one are bounded on at least one side (or bisected) by roads and railways. To escape their noise you must therefore travel at least 10 miles, as the crow flies, into the park. All development trends show that any wilderness reserve created today will be surrounded by roads in the future. Therefore, if we are to have any assured noise-free zones, all wilderness parks must be larger than 20 miles in the least dimensions.

It requires large areas to escape other industrial effects. For instance, the Georgian Bay Recreation Area, an area many times the 750 square miles minimum size proposed here for wilderness parks, has not escaped the effects of air-borne smelter pollution from the Sudbury area. Fish species are being exterminated in Killarney area lakes, apparently because smelter effluent dissolves in the water, bringing about detrimental changes in water chemistry.(10) Measurable effects from the same effluent are purportedly found in Algonquin Park, a 3,000 square mile area, some 100 miles from the nearest smelter. In the north end of Quetico Park, the snow turns pink in some winters from air-borne fallout from Atikokan iron beneficiating plants located 12 miles north of the Park boundary.

We could continue with other examples of water and airborne effluents. Two major requirements of wilderness are that man's interference be minimal and that there be the least possible interference in natural cycles and processes. Obviously, a minimal wilderness area of 750 square miles is not too large, but rather it is too small to escape the effects of much of man's activity.

A prime purpose in establishing wilderness reserves is to preserve intact ecosystems. However, ecosystems are constantly changing and evolving. If we wish to preserve a red and white pine ecosystem such as is found through much of Quetico, we must realize several things. First, a given piece of such forest has a life of 300-400 years. Second, if we are to continue to have examples of such forests in our wilderness reserves we need to have them in all stages of development. Then, as one piece of a forest dies out, another younger piece is coming along to take its place. Sound forest practice would suggest that these stages of development should be about 10 years apart.

So, in this example we would need to have forest in about 40 stages of development. In a 750 square mile reserve that means there would be about 19 square miles of newly regenerated forest, about 19 square miles of 10 year old forest, 19 square miles of 20 year old forest and so on up to 400 years.

Having 19 square miles of each age-class of forest sounds like a lot but is it? This makes no allowance for the area occupied by water, bare rock, unexpected forest fires, and other types of forest. And, as we will show later, the other types of forests are not only important but they are an absolute ecological necessity. So our 19 square miles will soon be down in the range of 5-8 square miles of each desired forest type. It would be halved if the reserve was to contain more than one forest section. This is really a fairly small area given the inexact state of the science of forest management today.

Now let us look at wilderness reserve size from the recreationist's view point. If the smallest dimension of a wilderness reserve can be 20 miles then we would have rectangular 750 square mile reserves that are 20 miles by 37.5 miles or 25 miles by 30 miles. A similar sized circular reserve would be 31 miles across. These minimum sized reserves would be traversed in their greatest dimension by the average hiker in 2-4 days, utilizing developed trails. An average canoe trip over similar distances would be 2-3 days. Does that sound like a large reserve? It seems not.

Other factors determine the quality of the recreationist's wilderness experience. Obviously, meeting too many other people destroys the wilderness feeling. Many travel routes disperse people; few routes concentrate them. Several modes of travel, e.g., backpacking and canoeing, disperse people throughout the reserve; one mode concentrates them. Numerous rivers and small lakes provide more opportunity for visitor separation than do a few large lakes. Several well separated access points spread out users over the reserve better than one or two major ones.

Quetico has more of these features which disperse people, in a greater abundance, than any other Ontario park. And yet major portions of Quetico are

being over-used to the detriment of the Park environment and the recreationist's experience. Quetico is 1,750 square miles and has no nearby population centres. Is a 750 square mile minimum too large then?

If 750 square miles is the minimum size for a wilderness reserve, we should also establish an average size. In so doing we note that wilderness, is as much an experience as it is a place. Classical wilderness was, and is, characterized by four things:

1. large area,
2. remoteness from civilization,
3. challenge,
4. ecological self-regulation.

While the challenge may have changed, the area become smaller, and the remoteness less, any vestiges of wilderness that may be retained must have all these characteristics.

Our existing large parks give perspective. Quetico (1,750 square miles) when it is not crowded provides a good wilderness experience for most people. Algonquin (3,090 square miles) does not. Polar Bear (9,300 square miles) provides a wilderness experience for most people at any time. Lake Superior (530 square miles) does not.[11] A Quetico ringed by development would be far less suitable than it is. Algonquin without roads, railway, and commercial exploitation would be good. Even without a highway and commercial development Lake Superior would still not provide much of the remoteness and challenge of wilderness. Because of its small size, peripheral development affects even the centre of this park.

Considerations along all of these lines, plus experience, indicates that if wilderness is to be preserved it will require an average sized reserve of 1,500 square miles. Obviously, some wilderness reserves will be smaller and some larger as they are tailored to the realities of politics, economics, land availability and recreational demand.

But above all these other realities, the paramount demand which reserve size must satisfy is the one of an ecologically viable unit. Unless it does that, it is not a wilderness reserve.

Obviously, wilderness reserves will be smaller and fewer close to southern Ontario, but we strongly believe the size figures used here are realistic. Polar Bear and Quetico certainly fit these figures. Ontario's third Primitive Park, Killarney, at 140 square miles[11] is a farce as a wilderness park.

We have belaboured the issue of reserve size here for two reasons. First, laymen, park planners and politicians alike have questionned the suggested reserve sizes more than all other points combined. Second and most important, indications are that if more wilderness parks or reserves are created in Ontario, they will more closely resemble our Killarneys than our Queticos. That we do not want.

Appendix II - The Federation of Ontario Naturalists.

The Federation of Ontario Naturalists is a research, educational, and service organization dedicated to the maintenance and improvement of the quality of environment and consequently the quality of life for all Ontario residents.

The Federation is a non-profit organization with over 12,000 direct adult members, together with a further 43 federated clubs distributed throughout the Province of Ontario. We are affiliated with other Canadian groups including the Canadian Nature Federation, The Natural History Society of Manitoba, and The Nova Scotia Bird Society.

With this membership, we believe that the Federation's views represent a significant segment of the population, who share a deep concern for the natural environment and an appreciation for the importance of thoughtful regional planning.

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